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ORIGINAL ARTICLES.

ACUTE APPENDICITIS.¹

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With Remarks in Opening the Discussion.

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HISTORY.

MORE than sixty years ago Albers, of Bonn, first described, under the name of typhlitis, localized inflammations about the cecum, of four varieties:

1. Stercoral typhlitis—stagnation of fecal matter in the cecum, with subsequent irritation.
2. Simple typhlitis—catarrhal inflammation due to a multitude of causes.
3. Perityphlitis—extension of the inflammation of the mucous membrane to the external coat of the cecum and the surrounding parts.
4. Chronic typhlitis.

Previous to 1820 Dupuytren recorded observations calling attention to the connection between abscess of the right iliac fossa and disease of the cecum. In 1827, Husson and Dance described the disease more in detail. In 1824, Louyer and Villermay gave the first description of a fatal peritonitis due to perforation of the appendix. Melier, in 1827, reported four cases, three of which were cases of perforative appendicitis with fulminating peritonitis; the other a case of relapsing appendicitis. He laid especial stress upon two distinct symptoms in the perforative cases, namely, more or less severe abdominal colic and fixed pain localized in the right iliac fossa. Melier not only described the causes, character, and consequences of appendicitis, but foresaw the possible advantages of operation in this affection. He says: "If it were possible to establish with certainty the diagnosis of this affection, we can see the possibility of curing the patient by an operation. We shall, perhaps, some day arrive at this result."

Subsequent memoirs of Ménière and Albers, advancing the notion that the lesions occupied the cellular tissues of the right iliac fossa, caused Melier's theories to be lost sight of. Later memoirs of Bodart, Favre, Forget, and of Leudet, added new facts to those established by Villermay and Melier.

Thus little by little the view that the grave and

fatal forms of typhlitis are due to perforation of the appendix gained ground, and that the benign and curable forms are due to an inflammation of the cecum and the cellular tissues which surround it. The theory still counts a few advocates, but fortunately they each year grow fewer and fewer. This much-vexed question has been restored to the status to which Melier had advanced it by the surgeons and physicians of the United States. They have demonstrated by early operation that inflammation of the right iliac fossa is invariably due, primarily, to disease of the appendix vermiformis.

Hancock, in 1848, operated upon one case, and advocated early operation. This met with no encouragement. In 1867, Willard Parker, of New York, first proved that early operation would save 75 per cent. of the cases. Dr. R. F. Noyes, in 1883, reported 100 operations, 90 per cent. of which had been performed in America.

An article in the *American Journal of the Medical Sciences*, by Reginald Fitz, published in 1886, "On Perforative Inflammation of the Vermiform Appendix," marks the epoch of the present status of this much-discussed trouble. Fitz collected 209 cases of typhlitis and perityphlitis, and 257 cases of perforative appendicitis. His conclusions have been summarized by Talamon as follows: "He showed that the symptoms are the same in the latter as in the former class of cases. He studied with care the consequences of perforation. He established the fact that the peritonitis is not always generalized, but that it may be circumscribed under the form of an encysted purulent collection. He gave the characters of the tumor formed by this localized peritonitis, the different modes of the evacuation of the pus, the complications that may supervene if the disease is left to itself. He insisted on the frequency of fecal concretions as a cause of perforation of the appendix. He concludes in favor of early surgical interference."

In a second paper published by Fitz, in 1888, he advanced the radical but sound theory that the diseases described as typhlitis, perityphlitis, paratyphlitis, appendicular peritonitis, and perityphlitic abscess, are all varieties of one and the same affection, namely, appendicitis.

ANATOMY.

The vermiform appendix is a narrow musculo-membranous tube ending in a blind extremity, and

¹ Read before the College of Physicians, May 2, 1894.

is the atrophied remnant of the elongated cecum. It is present in man and in some of the higher apes only. The elongated cecum persists in other mammalia. It is attached to the inner and posterior wall of the cecum, the point which originally was its apex.

The appendix may arise from the apex of the cecum, be a direct linear continuation of the colon, and thus afford an example of the fetal type. It may arise from the lower end of the cecum, under which circumstances it is unequally divided by the anterior longitudinal band, that portion to the right of the band being larger, while that to the left, though smaller, constitutes the true apex of the cecum. This is the type of cecum usually found when there is an increased development of the anterior wall, which rotates the apex posteriorly and to the left, thus bringing it into close relation with the ileo-cecal junction. Finally, it may arise from the lower end of the cecum, appearing between two bulging sacculi and posterior to the inferior angle of junction of the ileum with the cecum.

In cases of non-descent of the cecum the appendix will hold a corresponding abnormal position, when it may lie to the left of the median line. Lennander mentions the case of a boy of sixteen, in which the cecum and the appendix, which was nine inches long, were found lying against the spleen in the left hypochondriac region.

The length of the appendix varies from one to nine and a half inches, the average being four inches. When the appendix is long, the cecum as a rule is small. Its diameter is that of a goose-quill or about as thick as a large earthworm (Holden). The appendix is hollow and has an opening of communication with the cecum, which is usually guarded by a valve of mucosa.

The left or under layer of the mesentery joins with the serous covering of the appendix, which may be complete or incomplete, forming the mesentery of the appendix or the meso-appendix. In the majority of instances the appendix has a peritoneal covering throughout its entirety. When only a portion of the appendix is included in a peritoneal investment, it is the base or root that is destitute. The root of the appendix being uncovered makes this part of the organ extraperitoneal. If perforation should take place with this disposition of peritoneum, we can clearly see how infection of the postperitoneal connective tissue would occur and result in the formation of an abscess which would be extraperitoneal. Perforation of the appendix between the layers of the meso-appendix would cause infection of the postperitoneal connective tissue.

The meso-appendix is triangular in shape, the base corresponding to the free margin, and the

sides to the appendix and the mesentery. It is attached to the proximal one-third or two-thirds of the appendix, leaving the tip free, or it may be attached along its entire length, as I have usually found it. Sometimes it may be altogether absent or exist in so slight a degree as to be practically absent.

It consists of two layers of peritoneum between which run the appendicular artery and vein, and the lymphatics, in addition to some fat. Occasionally the meso-appendix contains a considerable amount of fat which, when operating for its removal, renders it more liable to be torn in the delivery of the appendix. The mobility of the appendix depends upon the extent of the attachment and the width of the meso-appendix.

The meso-appendix may have a hole in it through which the small intestine has been known to herniate and become strangulated. The iliac vessels have been known to pass through the layers of the meso-appendix. In the female it has a prolongation which is lost in the broad ligament; this is described by Clado as the appendiculo-ovarian ligament.

The shape of the appendix varies in accordance with the length of the meso-appendix. When it is short the appendix will present an abrupt curve. If the meso-appendix is shortened in several places it may present a corkscrew shape.

The appendix will occupy one of eight positions in the majority of all cases. Dr. Bristow suggests a very simple method of classification of the positions and directions of the appendix. It consists in locating a central point in the right iliac fossa which represents the attachment of the appendix in its most common position. From this central point are drawn lines radiating in eight different directions. Fowler has modified this method by substituting the initial letters of the points of the compass for the numbers. The central point is located by drawing a line from the anterior superior spine of the ilium to the umbilicus. A point on this line from two to two and one-half inches within the anterior spine will correspond to this central point.

The appendix may occupy either of the ileo-cecal fossæ, more likely the inferior or the sub-cecal fossa. In the event of its occupying the two latter fossæ, it would sometimes constitute a retroperitoneal hernia of the appendix. Again, if it should occupy one of these fossæ and the mouth of the fossa close over it, it might be regarded by the operator as being absent. Suppuration due to inflammation of the appendix so walled in would be circumscribed. Other abnormal positions of the appendix are met with, namely: (a) when it lies behind the peritoneum, below the cecum and adherent to its under surface, in contact with its muscular wall, and

covered by the peritoneal coat of the cecum; (*b*) adherent to the peritoneum along the right border of the cecum and ascending colon; or (*c*) adherent to the peritoneum at any point in the neighborhood of the cecum; and (*d*) in the inguinal canal.

When the appendix lies postcecal and postcolic, suppuration, the result of appendicitis, may simulate a lumbar or a perinephric abscess.

The normal positions of the appendix are five:

1. When it lies under the inferior layer of the mesentery directed toward the spleen.

2. When it lies on the ileo-pectineal line or projects into the pelvis. In this position it may become adherent to the bladder. Only in this position is rectal examination of value.

3. When there is a long meso-appendix, it may lie to the right of the cecum and the ascending colon, running upward parallel to the colon over the kidney and toward the right lobe of the liver.

4. When it lies in front of the colon and cecum.

5. When it lies under the cecum.

Usually the width of the meso-appendix accounts for the other three positions by allowing more motion to the organ.

ETIOLOGY.

The theory that appendicitis is due to a foreign body in the appendix—for example, seeds, pits of the smaller fruits, pins, buttons, etc.—has been accepted etiologically in a certain proportion of cases, and fecal concretions for the balance. Recent writers upon this subject have taken exception to this theory, basing their arguments on the fact that cases of appendicitis, with or without perforation, have occurred in which no foreign body could be found. They also present cases in which normal appendices have been found, while performing abdominal section for other conditions, as well as in post-mortem reports, in both of which fecal concretions or inspissated mucus was contained within the appendix without evidences of inflammation, and when there had been no history of symptoms of appendicitis. In every case of appendicitis these observers have demonstrated the presence of the bacterium *coli commune* in pure cultures or associated with pyogenic organisms. They have grown pure cultures of this bacterium from the walls of an inflamed appendix in which perforation had not occurred, and have also grown pure cultures from the interior of the appendix, and from the pus of an appendicular abscess. This bacterium is normally found within the colon and the appendix; still it has been proved that under favorable conditions—as, for example, inflammation of the appendix—it takes on pathogenic and pyogenic properties. The bacterium *coli commune* has been grown in pure cultures, or associated with

other pyogenic microorganisms, from the exudate of peritonitis, from the pus of a septic pneumonia following a perforative general peritonitis, and also from the spleen and liver of such cases.

From the number of cases in which I have found foreign bodies, it is my judgment that in the majority of cases of perforative appendicitis there is a direct relation between the presence of the concretion and the other causative agents. From the fact that so many cases of appendicitis follow so closely upon the ingestion of improperly masticated and hastily swallowed indigestible food, I cannot help thinking that there is a direct relation of cause and effect between them.

I would classify the causes of appendicitis under two heads—predisposing and exciting.

PREDISPOSING CAUSES.—*Age.* 15 per cent. of all cases occur under fifteen years of age, but the disease is most common between the ages of ten and thirty. The earliest stage in which I have met with the disease was in a child under two years.

Sex. Males are more prone to the disease than females.

Constipation, from its tendency to provoke catarrhal inflammation.

Tuberculosis, when secondary to the involvement of the cecum. Should the disease be most pronounced in the appendix, it is likely to be followed by a result similar to that of acute perforative appendicitis. The appendix being a rudimentary organ, and therefore of lower vitality than the cecum, is more likely to suffer from pathological processes.

By far the most frequent cause is a *previous attack*, a history of which cannot always be obtained on account of its mild character.

Exposure to cold and wet. I have met with two cases illustrating these agencies. In one the attack was provoked by taking a cold shower-bath after coming out of a warm bath; the other was the result of wet feet.

Traumatism, such as from violent exercise or sudden blows. The former is more likely to cause the disease if it immediately follows the taking of a heavy meal. As I have already stated, the rapid ingestion of indigestible food is an exciting cause.

EXCITING CAUSES.—*The introduction of foreign substances,* such as fecal matter, pits, or enteroliths, when associated with the ever-present bacterium *coli commune*, is the most frequent exciting cause of appendicitis.

PATHOLOGY.

In considering the pathology of acute appendicitis there is a great difference of opinion as to the cause in localized abscesses of the peculiar offensive odor which the pus possesses; whether this odor is due to a commingling of the gases of the bowel which

are intimately admixed with the pus, or whether it is the result of decomposition of the contents of the abscess. I believe this odor to be entirely fecal, as we find that abscesses occurring elsewhere in connection with the bowel will possess the same characteristic odor which is found in the appendiceal abscess.

Cases which take on the gangrenous type of inflammation may lead to the destruction of the cecum at the base of the appendix. I have seen several such cases during the past year.

Tuberculosis has been found in my experience to be one of the remote causes of suppurative appendicitis.

The rôle which the bacterium coli commune plays in the production of peritonitis lies in the fact that the appendix is a hatching-bed for this dangerous form of bacterium. It can rest within the cavity of the appendix and multiply with perfect impunity, not being in the direct channel of fecal circulation, and irrespective of the fact that intestinal antiseptics may have been administered.

The appendix in an acute inflammatory condition is enlarged, congested, and hard; its peritoneal coat is thickened and at times covered with flakes of lymph. The mucous lining is habitually thickened, not infrequently being almost equal to all of the other coats. Within it presents corrugations, at times irregular ulcerated areas, and in subacute cases may rarely be the seat of small mucous cysts. If perforation has not already taken place there may be seen a dark spot of softening, containing within its tissues colonies of the bacterium coli commune. If perforation has taken place, the tissue surrounding the opening of communication will extrude through it.

In perforation of an appendix in which there is a fecal concretion, the perforation usually takes place at the situation of the concretion. There may be gangrene of the entire walls of the organ, leaving a direct communication with the bowel; or only of the outer coat, leaving the mucous membrane intact. If the appendix be turned upon itself and its inflamed end be in contact with the cecum, ulceration at the spot of contact will occur. I have recently operated upon a case in which such a condition of affairs was present.

On several occasions, while washing out the abscess-cavity I have seen a gangrenous appendix that had ulcerated off appear in the wound.¹

CLINICAL HISTORY.

Acute appendicitis is usually ushered in suddenly by a severe pain which may be peri-umbilical or

epigastric. The character of the pain is paroxysmal and colicky, varying in intensity. Coincident with the pain there is vomiting, first of the contents of the stomach, later of bile-stained material. The colic now subsides, and the pain shifts to the right iliac fossa and becomes constant. There may be a point of greatest intensity, or it may be diffused. The abdominal muscles of the right side are contracted and rigid. There is but little fever. The attack may terminate here with a gradual subsidence of all the symptoms; or on the other hand, this attack may be followed directly by a return of the abdominal pain, and vomiting which is incessant and uncontrollable. The entire belly-wall becomes tense and rigid, though the more so on the right side. The patient takes on the typical and anxious expression of the Hippocratic face, and symptoms of collapse appear, with sweating, and cold and blue extremities, death finally supervening from diffused septic peritonitis.

In another type, the pain, which at first has been diffused, concentrates itself in the right iliac fossa. The accompanying rigidity of the muscles of the right side is replaced by a swelling which in some instances presents to the touch a doughy sensation, and in others that of a hard mass the contour of which is not constant.

The fever, which up to this time has been of a moderate degree becomes pronounced, with a decided rise in the evening and remission in the morning. While this symptom usually indicates pus, absence of a rise of temperature does not necessarily preclude the possibilities of the presence of pus. This I have demonstrated many times by operation to the skeptical attending physician, who has pinned his faith to the thermometer, which instrument is of but little value in the majority of this class of cases.

SYMPTOMS.

Pain. The initial symptom is pain. This usually follows the ingestion of a hearty meal of indigestible foods, improperly masticated and hastily swallowed, particularly when eaten at night. The character of the pain at the outset is paroxysmal and colicky. So far it simulates an attack of acute intestinal indigestion. The term appendicular colic has been applied to this initiatory pain. To this, however, objection has been raised, as the cause of the pain is inflammatory and not functional. While acknowledging the cause of the pain to be inflammatory, yet I am convinced that it may be paroxysmal in character; otherwise how can we explain the wave-like exacerbations so vividly described by an intelligent patient. Palpation over the affected area excites and intensifies this peculiar, wave-like, characteristic pain. Fowler, who in a recent article upon appendicitis has taken exception to the term

¹ Microscopic and bacteriologic examinations are being made by Drs. Stengel, Abbott, and Kneass, and will be published at a later date.

appendicular colic, offers as an argument the absence of poor development of the circular muscular fibers of the appendix, and from this argues the inability of the appendix to cause this colicky pain by expulsive efforts. I must take exception to Fowler's statement, particularly regarding the absence of circular muscular fibers in the appendix, as this organ possesses a continuous circular muscular coat. I will, however, grant that the circular muscular fibers are not always as well developed as the longitudinal, but I am convinced that the appendix possesses sufficient contractile power to cause a colicky pain by its expulsive efforts. The study of pathological appendices cannot be relied on for histological facts. The dissection of normal appendices proves the presence of circular muscular fibers. The irritation arising from a simple catarrhal inflammation of an appendix in which there is no fecal concretion or foreign body, is capable of giving rise to expulsive efforts which cause the colicky pain and which may be likened to similar efforts of an inflamed rectum or bladder.

Location of pain. The primary pain is referred most frequently to the umbilicus or peri-umbilical region; next in order of frequency to the epigastrium; and last of all to the region of the appendix. After the occurrence of localized peritonitis in the right iliac fossa the pain is here located. I have observed two cases in which the pain was referred to the left iliac fossa, in neither of which, as demonstrated by operation, did the appendix occupy the corresponding position. In one the appendix hung down into the pelvis and in the other it was retrocecal.

Rigidity of the abdominal walls. This, next to pain, is one of the most reliable signs. It is usually confined to the right side of the abdomen, being most marked over the inflamed region, and immediately follows the localization of pain in this locality. In some instances the rigidity is so pronounced that it operates against deep palpation, and in addition makes the percussion-note of higher pitch.

Vomiting. Coincident with the onset of the initial pain there is vomiting of the contents of the stomach. This usually does not persist in favorable cases, while in unfavorable cases it is persistent and uncontrollable. The ejecta consist first of the contents of the stomach, later of bile, and finally, if intestinal paresis supervene, consequent upon a septic peritonitis, of stercoraceous matter. When the material rejected becomes stercoraceous, it is thrown off by regurgitation, indicative of a fatal termination.

Constipation. Constipation is present in the majority of cases of appendicitis, yet in a few diarrhoea ushers in the attack. Obstinate constipation early in the disease is due either to intestinal paresis,

the result of infection, or to the indiscriminate use of opium.

The temperature and the pulse-rate bear no direct relation to the gravity of the attack. We may have early perforation and gangrene of the appendix with but a moderate rise of temperature; on the other hand, there may be a decided rise with a simple catarrhal inflammation of the appendix. The pulse in the former class of cases more nearly corresponds to the gravity of the attack. A sudden fall of temperature to the normal or below normal is not by any means ground for a favorable outlook, as too often it indicates the lull which immediately precedes the storm of destruction, in the shape of perforation or a ruptured abscess. This is in accord with the statement that I have already made, namely, that the thermometer is a most untrustworthy instrument in determining the severity of a case.

Tenderness is one of the most valuable and constant of all the signs or symptoms. It is always present, although if the appendix be postcecal and the rigidity of the abdominal walls marked, it is difficult to elicit, requiring deep palpation. Sometimes it can be elicited through the rectum or vagina. In vaginal or rectal palpation in the female, the possibility of a right-sided pyosalpinx and salpingitis must be borne in mind. In rare cases the tender spot may be located in the loin, only to be discovered by deep palpation. After the advent of suppuration the tenderness becomes general in the right iliac fossa and loses its extreme severity. Frequently after the remission which follows the sudden sharp primary attack, tenderness and rigidity alone remain to tell the attending physician that trouble still exists in the right iliac fossa. The point of greatest intensity is usually over the inflamed appendix, but to this rule there are exceptions. I have recently met with a case in a young adult male, in which the point of greatest tenderness was to the left of the left rectus muscle, a little above the level of the anterior superior spine of the ilium. By rectal examination a small but very sensitive mass occupying the recto-vesical space was detected. The operation demonstrated the appendix occupying this position. The point of greatest intensity usually corresponds to the so-called McBurney's point.

I recall two cases in which the point of greatest tenderness was immediately above the middle of Poupart's ligament. This, as demonstrated by the operation, corresponded to the angle of curve in the appendix; in both cases the origin was from the postero-external aspect of the base of the cecum, descending in front of the latter as far as the apex, where it curved abruptly upward.

Distention may be due to several causes: to mechanical obstruction, to paralysis of the intes-

tines, to septic causes, to obstinate constipation, and consequent collection of gas. Richardson points out the possible differential diagnosis by means of auscultation between distention due to accumulated gas from mechanical causes, and that to paralysis of the intestines the result of infection—the sounds of peristaltic action being clearly heard in the former condition but not in the latter. The distention may sometimes be limited to the right side of the abdomen; here only those portions of the gut in relation with the inflamed area are affected. This local distention may be marked, because the still functionally active intestine will force more gas into the affected portion. If the peritonitis become diffused, the abdomen is flat and its walls rigid and hard. This appears early and arises from the complete paralysis of the intestinal canal preventing the entrance of gas. A distended abdomen associated with marked and uncontrollable vomiting is an ominous combination of symptoms.

Tongue. The tongue is furred, and if diffused peritonitis occur may become dry, associated with a deposit of sordes upon the teeth.

Urine and bladder. The urine is usually diminished in amount, and contains albumin and indican. Several theories have been advanced to explain this diminished and albuminous urine. The most tenable of these is that there is a decreased activity of the glomerules of the kidney, due to the general fall in the arterial tension. Frequency of urination is often a prominent symptom from the first, being most probably due to disturbance of the sympathetic nerves, and when the inflamed appendix occupies the pelvis, to irritation of the bladder directly communicated thereto. In peritonitis involving the serous coat of the bladder, retention of urine may occur, necessitating the use of the catheter.

Respiration. Respiration plays a comparatively unimportant part in the symptomatology of appendicitis, yet I have noticed early in the attack a voluntary limitation in breathing, the patient thus favoring the tender side. If the distention is pronounced the respiration is correspondingly labored, while if there is active peritonitis the respiration is thoracic. In advanced cases of appendicitis with a diffuse peritonitis, a symptom that I have also noticed is a peculiar reflex condition of the pharynx, which the patient speaks of as a difficulty in swallowing.

Leukocytosis. According to Richardson, leukocytosis is an invariable symptom in perforative appendicitis. In one case he deferred operation for twenty-four hours on account of the absence of this symptom, the patient dying a few hours after the draining of an extensive general infective peritonitis.

DIAGNOSIS.

Ordinarily, I regard the diagnosis of appendicitis as simple. The suddenness of the attack; the pain referred either to the peri-umbilical region or right iliac fossa; the occurrence of nausea and vomiting coincident with the pain; and tenderness over the site of the appendix, are pathognomonic. One of the greatest sources of error is the masking of the symptoms by the use of large doses of opium in some form.

The ushering in of an acute attack of appendicitis simulates very closely that of an attack of bilious colic, the pain being peri-umbilical or epigastric, and associated with vomiting. Shortly the pain becomes localized and more intense in the iliac fossa, when we should at once suspect more serious trouble. Owing to the fact that appendicitis follows some hours after the ingestion of food, the vomited matter consists of partly digested material, and is often bile-stained. The pain and tenderness cause the patient to voluntarily assume the dorsal decubitus with thoracic respiration, to favor the affected side. Palpation reveals decided rigidity of the abdominal walls, most marked on the right side, and particularly over the right iliac fossa. While it may be slight, yet the experienced sense of touch cannot fail to recognize it. Tenderness is a most important and reliable diagnostic sign. It is always present, and corresponds to the point of greatest intensity of the inflammation, which is the appendix. This may correspond to McBurney's point, or when the appendix holds an anomalous position its location will be governed by that of the organ—as, for example, when the appendix occupies the pelvis. The point of greatest tenderness is elicited by rectal palpation. Between the disease and the extent and intensity of the tenderness there is a close relationship. When the tenderness continues to increase it shows the progressive tendency of the attack; while if it decrease without the administration of opium, it is indicative of a favorable termination of the attack. I have recently operated upon a case in which the greatest tenderness was elicited by rectal examination, and where there was also a distinct point of tenderness to the outer side of the left rectus muscle; this was explained by the presence of adhesions, indicative of Nature's effort to circumscribe the purulent collection.

Fulness. Fulness in the right iliac fossa appears late, after inflammatory exudate and adhesions are formed; coupled with this a doughy feeling may be present, indicating the presence of pus, though this is not a reliable diagnostic sign. Accompanying fulness there may be edema of the abdominal walls. Excessive circumscribed tenderness I have come to regard as a more reliable sign of the presence of pus than either doughiness or edema.

When the appendix lies over the psoas magnus or iliacus muscles, flexion of the thigh may be an early sign. Another cause for flexion of the thigh upon the abdomen is rigidity of the anterior abdominal wall due to peritonitis, this, however, being a later manifestation.

Distention. In simple appendicitis the distention, if at all present and not due to mechanical causes, is confined to the seat of the inflammation. Distention occurring in connection with appendicitis is due to peritonitis, and its extent corresponds to the area of inflamed peritoneum. Mechanical obstruction due to constipation, or the use of opium causes distention, which differs from that of septic peritonitis in being functional, and can be differentiated by auscultation. Functional distention simply occasions discomfort, while that of septic paralysis is indicative of a grave type of the disease. Distention may also be due to acute mechanical intestinal obstruction, such as bands. In some early cases of perforative appendicitis in which the general peritoneal cavity is not yet walled off, and septic peritonitis supervenes, we may not only not have distention, but instead may have a scaphoid or retracted belly, due to profound paresis of the intestinal canal, which would prevent the admission of gas.

Only in cases of appendicitis with circumscribed peritonitis are we likely to detect the presence of a mass. Even under these circumstances rigidity of the overlying abdominal walls may mask this sign, unless it occupy the pelvis, when it can be detected by rectal or vaginal examination. If the patient be a female, right-sided pyosalpinx or salpingitis must be excluded. Rectal examination should be confined to the use of the finger. The introduction of the hand, I maintain, is unjustifiable, as it endangers adhesions and the rupturing of abscesses. Examination under ether will not throw sufficient additional light on the diagnosis of an obscure case to warrant the administration of the anesthetic.

The advent of suppuration may or may not be accompanied by a chill.

The temperature in appendicitis is so variable and inconstant that it is of little value except in the differential diagnosis between it and some other conditions in which it is characteristic.

Percussion over the diseased area will give a flat or resonant note depending upon the appendix.

In a doubtful case in which it would seem to be impossible to differentiate, rather than introduce an exploring or aspirating needle, either of which procedures under these circumstances I regard as most unsurgical and attended by no little danger, I would advise an exploratory incision.

Differential diagnosis. Appendicitis may be confounded with the following conditions:

1. *Bilious colic or acute indigestion.* The onset of the attack of appendicitis is somewhat similar to that of an attack of acute indigestion, differing, however, in the character of the vomited matter, and in the fact that the pain soon becomes located in the right iliac fossa, and is accompanied by tenderness.

2. *Hepatic colic.* In hepatic colic the painful area is usually higher in the abdomen, referred also to the shoulder, and most severe over the region of the gall-bladder, and usually followed by jaundice.

3. *Floating kidney.* From floating kidney with a twisted pedicle, appendicitis may be diagnosed by the presence of blood in the urine, a history of a movable tumor prior to the attack, a depression in the right loin corresponding to the site of the kidney, and possible symptoms of uremia.

4. *Intestinal obstruction.* In intestinal obstruction the onset is more abrupt, and the pain, which at first was remissive, is referred to the seat of the obstruction, more commonly to the umbilicus; there is absolute constipation and inability to pass flatus, and vomiting occurs early and soon becomes fecal. With the onset of peritonitis regurgitant vomiting occurs, and there is absence of fever unless the patient survives long enough to allow inflammation to set in. Invagination is the most common form of obstruction in children, while obstruction from bands and volvulus are more common in adult life. Tumors from these forms of obstruction are more common to the left of the linea alba. When obstruction is the result of invagination, blood and mucus will be discharged from the rectum, and upon examination through this avenue a tumor may be felt. The early development of peritonitis in acute intestinal obstruction is marked by great distention of the abdomen. Shock and collapse appear early in obstruction, but not in appendicitis, unless it may be of the fulminating type, and even then collapse does not occur as early.

5. *Pyonephrosis.* From abscess of the kidney appendicitis differs, first, in that the pain in the former radiates to the groin and testicle with retraction of this latter organ. Tenderness is elicited on pressure over the kidney. There is irritability of the bladder and diminished excretion of urine, which contains pus and possibly some blood. In the absence of urinary symptoms, abscess of the kidney, and particularly if it be a floating kidney, is necessarily more difficult to differentiate. In the latter instance, however, the tumor will be movable. I have recently operated on a case of acute suppuration of the kidney in which the urine was normal, and the diagnosis was made on the anatomic situation of the swelling. Nausea, sometimes with vomiting, is not an inconstant symptom.

6. *Perinephric abscess.* When the appendix holds a retrocecal position and an abscess forms, it may

be mistaken for a perinephric abscess, but the absence of intestinal disturbance will be sufficient to clear the diagnosis.

7. *Nephritic colic.* To differentiate between nephritic colic and appendicitis is at times difficult, owing to the fact that in the latter condition there is in rare and exceptional cases pain referred to the umbilicus, retraction of the testicle, associated rectal and vesical tenesmus, and painful micturition. This error, however, could only occur in the early stages of appendicitis, as the symptoms of the later stages are so entirely dissimilar. I recall the case of a physician, in which the diagnosis of renal colic had been made, and in which the ureter was supposed to have been ruptured by the passage of a calculus. The autopsy revealed a gangrenous and perforated appendix with diffuse suppurative peritonitis.

8. *Hepatic and perihepatic abscess.* Appendicitis can only be confounded with abscess of the liver or about the liver when, late in the disease, a circumscribed collection of pus is in close relation with this organ, and when the appendix is postcecal and points toward the liver. The previous history, the hectic temperature of hepatic or perihepatic abscess, and the pain referred to the shoulder will be sufficient to establish the diagnosis.

9. *Enterocolitis.* In this disease the colicky pain is more marked, and there is present a mucous diarrhea and extreme collapse.

10. *Neuralgia of the right iliac fossa.* Neuralgia of the right iliac fossa is a condition associated with localized intermittent pain, which is relieved rather than increased by deep pressure. A case has been reported by Shrady of a medical man whose appendix was removed under these circumstances.

11. *Extra-uterine pregnancy.* From extra-uterine pregnancy the diagnosis is made by a history of pregnancy; and along with the rupture of the sac and production of a pelvic hematocoele, there is profound collapse followed by a discharge of blood and decidual shreds.

12. *Typhoid fever.* From typhoid fever appendicitis can be differentiated by the frequency of the pulse, the absence of the characteristic temperature, the coated tongue with red border, epistaxis and headache. The presence of spots does not necessarily indicate typhoid fever, as spots may be present in septic conditions.

13. *Hip-joint disease.* The presence of the characteristic deformity, inability to execute the normal movements of the joint, pain referred to the knee, arching of the lumbar spine when the limb is brought into the fully extended position, and absence of intestinal symptoms, should settle the diagnosis.

14. *Abscess of the abdominal wall.* Between

abscess of the abdominal wall and that caused by appendicitis, there should be but little difficulty in arriving at a correct conclusion. If the collection is in the superficial fascia it will be circumscribed, while if between the abdominal muscles it is likely to be diffused. The purely local character of the abdominal abscess, the swelling moving with the abdominal walls, the absence of intestinal symptoms, the presence of local and constitutional evidences of pus, coupled with the history of the case, should be enough to render a differential diagnosis possible.

(To be concluded)

SUICIDES. ✓

BY CARL JOHNSON, M.D.,
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IN the performance of my duties as Police Surgeon during the past fourteen months I have treated forty-six cases of suicide and attempted suicide. They were very nearly equally divided as to sex: twenty-four were females, and twenty-two males.

The cause of the attempt was ascertained in thirty-seven cases. Ten were on account of lovers' quarrels. The greater part of these were among the class known as "kept women." Only one was a public prostitute. Eight were due to poor health, combined in five instances with poverty. Three were well-marked cases of melancholia. Two wanted to die because they could not quit drinking. Four were on account of trouble between man and wife. Seven were out of work and out of money. One had no money to defend himself against a charge of larceny, of which he claimed to be innocent. One was a mother who had just heard of the death of her child in Kansas, and had no money to enable her to go to its funeral; and one man, who knew himself to be impotent, married a young lady, and tried to do away with himself after several months of wedded misery. At least three-fourths of the cases were partly under the influence of liquor at the time of making the effort at self-destruction.

In twenty-eight cases opium or some of its derivatives was taken. Three took strychnin. One took "Rough on Rats," which is composed principally of crude arsenic. One took half an ounce of fluid extract of cactus grandiflorus; one took an ounce of carbolic acid; one drank several ounces of a saturated solution of chloral hydrate; and one tied a bottle of chloroform around her neck in such a way that the open mouth of the bottle was in contact with her nostrils. One took two ounces of "bromidia," and one disappointed young man chewed up a seltzer glass and swallowed it. Three attempted to suffocate themselves with illuminating gas. One of these claimed to have blown out the

gas accidentally, but the surroundings and circumstances all indicated that it was intentional.

Another, a boy of sixteen, buckled a strap around his neck so tightly that he was comatose when discovered. This boy, who was an epileptic, had made a previous attempt in the same unique manner, had also jumped head first into a well, and thrown himself in front of a moving train, without injury each time. One severed his radial artery with a sharp-pointed harnessmaker's knife. One tried to shoot himself, and one was lying on the floor dead when found, having probably taken hydrocyanic acid. In addition to this one, five of the cases ended fatally.

Three of the fatal cases were due to opium, one to strychnin, and one to chloral hydrate. One of the fatal opium-cases, an old man, recovered from the direct effects of fifty grains of morphin, but died ten days later from inanition and exhaustion as an indirect result of the attempt.

The case classed as death from strychnin should, perhaps, be classed as a death from an unknown cause. This man had repeatedly threatened to kill himself. He was suddenly taken sick, and I was sent for, and found him with well-marked symptoms of strychnin-poisoning. A stomach-tube was inserted, and his stomach well washed out. He recovered in a few hours, and said he had gone to a drug-store, called for ten cents worth of morphin, and taken it. He had presented no symptoms of opium-poisoning. A few days later he was taken sick with symptoms of gastritis, from the effects of which he died in about two weeks from the time I was first called to see him. I have never arrived at a satisfactory conclusion in regard to this man's death. The onset of the gastritis was not sudden enough to indicate that he had again attempted suicide by taking an irritant poison, unless it was taken in small and repeated doses, which would be very unusual for a suicide.

I have related this case at length to call attention to the fact that the gastritis might possibly have been caused by undue violence in the passage of the stomach-tube, and to emphasize the fact that too much care cannot be used in the passage of this instrument. The stomach-tube was used in twenty-three of these cases, and in no other instance could any bad effects be referred to it. I have used the lever stomach-pump, manufactured by Tiemann & Co., with a lisle-thread-tube. The ordinary soft-rubber-tube, with a funnel at the top, is almost useless for the treatment of suicides. I have on two occasions passed the tube down the trachea instead of the esophagus, but the mistake was discovered before any damage was done by simply placing the finger over the end of the tube, when the current of air accompanying respiration could easily be felt. This is a precaution which should always be taken

before fluid is introduced. I know of a case in this city in which a man who had taken morphin with suicidal intent was actually drowned by this unfortunate method of pulmonary irrigation.

In the twenty-eight opium-cases reported the preparations taken were as follows: Morphin, 20; tincture of opium, 5; powdered opium, 1; aqueous extract of opium, 1; and one smoked opium, taking a large dose of morphin soon afterward. The smallest doses taken were half an ounce of the tincture of opium in one case, and three and one half grains of morphin in another. The largest dose was the entire contents of a dram-bottle of morphin. This quantity was taken in several cases. In all of the cases the drug was taken by the mouth.

I shall confine my remarks on treatment entirely to cases of opium-poisoning, as these are seen to be by far the most common. The symptoms are practically the same, no difference being observed, whatever the preparation of opium taken. Morphin in solution and the tincture of opium act more quickly than the solid forms, such as morphin pills and powdered opium.

The first stage of opium-poisoning is one of increased nervous excitability. I think that the small percentage of successful suicides by this agent is due largely to this condition. The patient becomes talkative and excitable, and if he engages in conversation with anyone he almost always betrays the fact that he has taken poison, thus allowing early treatment to be instituted. When a large dose is taken, this stage may be very short. Its duration is from ten or fifteen minutes to three or four hours. The second, or the stage of somnolence, is ushered in by a feeling of drowsiness, and the patient goes into a condition very closely resembling sound sleep. This soon gives way to the third, or stage of narcosis. The patient is now entirely insensible to pain, the pupils are small, the face has a purplish hue, the respiration is slow and snoring, but usually not stertorous. The pulse is either strong and nearly normal, or rapid and weak. The skin is relaxed and moist, but the perspiration is rarely profuse. I am aware that these symptoms do not agree in some respects with those given by the authorities on toxicology, but I have given them as noticed in my own cases. As to the differential diagnosis, the contracted pupils, exceedingly slow respiration, and cyanotic face, are usually sufficient to establish a diagnosis.

The case mentioned in which chloral hydrate was taken puzzled me greatly. When I was called the patient, a woman of thirty-five, was lying asleep. I aroused her, and she muttered a few words, turned over, and went to sleep again. The pupils were normal or slightly dilated, the pulse about normal, but rather weak, and respiration normal. I ex-

pressed the opinion that she was only drunk, as her breath had a distinct odor of alcohol. I was told that she had been drinking, but she had told her friends that she was tired of life, and was going to "take a dose." I gave her a hypodermatic injection of apomorphin, and, to my surprise, it failed to act. After waiting about ten minutes I tried to arouse her, but failed. The pulse became weaker and rapid, the respirations more shallow, and she died within half an hour of the time I was called.

Repeated injections of strychnin and digitalis had no effect either on the pulse or on the respiration. The countenance was natural, and the rhythm of the respiration was uninterrupted and noiseless to the last. I did not make a diagnosis until after death, when I found a bottle of a strong solution of chloral hydrate from which several ounces had been taken. The temperature of the patient was not taken.

A curious fact which has been noted by both my colleague, Dr. Wheeler, and myself in opium-poisoning is that several fatal cases have, after being unconscious for a long time, opened their eyes, moved their hands, and shown other signs of returning consciousness, dying almost immediately afterward. The patients have been pulseless and in a dying condition when this phenomenon occurred.

The first step in treatment is, of course, to empty the stomach. If the patient is still conscious or can be aroused, I depend on apomorphin hydrochlorate for this. I give one-fifth of a grain hypodermatically. This drug deteriorates if kept too long, and should be replaced by a new supply occasionally. As soon as the apomorphin has been given I have the patient drink as much water as he can be prevailed upon to take. Free emesis occurs in from one to ten minutes. I believe that any patient seen early enough to induce vomiting in this manner by apomorphin will recover. In fact, most of them require no further treatment, unless it be simply to keep them awake if they show a tendency to go to sleep. The dangerous cases—those that require energetic treatment—are so profoundly influenced by the narcotic that the cerebral centers fail to respond to the irritation of the apomorphin.

If the case is too far advanced for apomorphin to be of service, I proceed to pass the stomach-tube, attach it to the pump, and inject about a quart of hot water. I leave this in for a few minutes, to allow it to dissolve whatever solids there may be in the stomach, and then withdraw it by reversing the pump. This is repeated several times, or until the water removed from the stomach is clear. In the meantime I have had prepared a quantity of hot, strong coffee. I now inject one or two quarts of this into the stomach. This procedure is almost invariably followed by an improvement in the res-

piration and a lessening of the cyanosis. The coffee acts as a physiologic antidote to the opium, although I believe the heat which is conveyed from the distended stomach to the solar plexus and diaphragm, and perhaps to the heart itself, to be more beneficial than any direct action of the coffee. I have used hot water when coffee could not be obtained, and the difference in the result was not appreciable.

I have often used coffee so hot that I could not bear my hand in it in this manner without bad after-effect, and consider it one of the most efficient remedies at our command for stimulating the heart and respiratory organs in these cases. The coffee is pumped out as often as it becomes somewhat cooled, and replaced with hot coffee. I wish to lay stress on the importance of having the stomach fully distended with the hot fluid, as I think this to be an essential point.

It must be admitted, however, that this procedure is not without danger. If a gastric ulcer should be encountered it might result in serious hemorrhage, or even rupture of the stomach. I have supplemented this method in a few cases by rectal injections of coffee. I have found it difficult to induce the rectum to retain enough to distend the transverse colon, where it seems to me it would be of the most benefit. This difficulty might be obviated by injecting the fluid more slowly than I did or by using a rectal tube.

The galvanic current I have not had an opportunity of using, as a portable galvanic battery is not easily obtained. I hope at some future time to be able to make a report of cases treated with the aid of the chlorid-of-silver galvanic battery now on the market, which is easily carried to the bedside. I have used a strong Faradic battery for two purposes: First, for stimulating the respiratory muscles. To do this I place the positive pole between the shoulders, and move the negative pole from side to side along the anterior attachment of the diaphragm. I have failed to perceive much benefit from its use in this manner.

The principal use I make of the current is in keeping the patient awake. I leave the positive pole as before, and touch the negative pole to the patient's lips, nose, ears, or eyelids as often as necessary. I have been able to keep patients awake in this manner when walking and slapping had failed. I regard the time-honored custom of walking and abusing a patient until he is exhausted as entirely unnecessary, and believe that it actually lessens the chances of recovery. It has seemed to me that if a healthy person who had taken no opium was put through the same treatment that these unfortunates are often compelled to undergo he would die of exhaustion. Much less, then, could a person whose vitality is already lowered by the action of a powerful narcotic

be expected to withstand the added depression following the severe treatment so often persisted in.

The endeavor should be to save the strength of the patient, not to exhaust it. I always put the patient to bed, cover him up, put dry clothing on him if, as is usually the case, cold water has been thrown on him, and depend on the battery to keep him awake as described. In the absence of a battery, pulling the nose is nearly as efficient as walking the patient, and does not exhaust him.

As for drugs, I rely largely on strychnin sulphate. I give a twenty-fifth of a grain hypodermatically, and in extreme cases repeat this dose every ten or fifteen minutes, until there is twitching of the muscles or the breathing becomes spasmodic in character. Even after it is pushed to this extent the effects wear off rapidly, and it needs to be frequently repeated. I am convinced that I have saved several cases which would have died had not this drug been used. I usually give $\frac{1}{100}$ of a grain of atropin, and repeat it twice at intervals of fifteen or twenty minutes. I think the importance of this remedy has been over-estimated. It certainly dilates the pupils, and theoretically it counteracts the systemic effects of opium, but I have failed to notice any decided beneficial effects from its use.

I have at times used digitalis, and I believe it to be of some benefit when the heart's action is weak. It has the disadvantage, however, of being slow in its action, even when given subcutaneously. I therefore depend largely on the more transient heart-stimulants, whose action begins more promptly. In a few cases I have given hypodermatics of aromatic spirit of ammonia. This is a very good diffusible stimulant, but has the objection of frequently causing an abscess at the point of injection.

When the patient has not been under the influence of liquor prior to taking the opium I sometimes give whiskey or brandy subcutaneously with good results. If the unconsciousness is long continued the catheter should be passed to prevent the possibility of reabsorption of the poison from the urine. I have frequently heard "morphin fiends" make the assertion that an overdose of opium would be counteracted by cocain. Acting on the suggestion I gave a man in the last stage of narcosis a quarter of a grain of cocain hydrochlorate every ten minutes until I had given him three doses. His pulse became very weak and rapid, and he died in a few minutes after the last injection. I have made no further experiments with cocain. In another case to which I was called a physician who had preceded me by an hour and a quarter had treated the case solely by the subcutaneous injection of the tincture of iodine—for what purpose I cannot conceive. The man died soon after my arrival.

I believe the responsibility for a large percentage

of the suicides in this city rests with the newspapers. A suicide written up in a sensational manner, accompanied, perhaps, by a picture of the deceased, is usually followed by a number of attempts by others within a short time. There are at all times in every city a number of poorly balanced individuals who need only the suggestion conveyed to them in this manner to determine them to make an effort to end their existence.

CLINICAL LECTURE.

EXTRA-ARTICULAR ABSCESS NEAR THE HIP— COMPOUND FRACTURE OF THE LEG; SIMPLE FRACTURE OF THE THIGH—PARAPLEGIA DUE TO POTT'S DISEASE.

*A Clinical Lecture
delivered at the Buffalo General Hospital.*

BY ROSWELL PARK, A.M., M.D.,
OF BUFFALO, N. Y.;

PROFESSOR OF SURGERY IN THE UNIVERSITY OF BUFFALO.

EXTRA-ARTICULAR ABSCESS NEAR THE HIP.

THIS patient is a boy, four years of age, whose trouble dates back two weeks, when his mother took him out for a short walk on a chilly night. During the walk he was taken with nose-bleed and vomiting, and he appeared to be thoroughly chilled. After reaching home fever succeeded the chill, and within a short time there developed pain, swelling, and other symptoms of inflammation about the left hip. Ever since then the child has been peevish, complaining in a general way of pain, and with evident tenderness about the hip. Dr. Bernard Bartow has seen the patient, and I will ask him to give you the further history of the case.

DR. BARTOW: All I recall as bearing upon the diagnosis and indications for treatment are the acuteness of the trouble to which Dr. Park has referred; the fact that the child was previously well, except for an attack of whooping-cough, and the evidences of trouble in or about the hip-joint, as shown by pain on motion, the malposition of the limb, and later the swelling of the hip. The child was treated at first by a physician who made a diagnosis of rheumatism. Later, as the symptoms did not abate, another physician was called, who applied a blister and made the diagnosis of hip-joint disease. The acute development of the trouble excludes the ordinary chronic form of tuberculous hip-joint disease. Owing to the pain which digital examination caused, I have not decided as to the exact nature of the swelling.

DR. PARK: Such a history suggests several diseases to be differentiated from one another; inflammation somewhere in the bone, the shaft of the femur, head, epiphysis, or about the acetabulum; an acute synovitis taking on the purulent form; or an extra-articular inflammation with abscess-formation. These are among the more probable explanations of the trouble. If there were inflammation of bone coming on suddenly in this location, there would be not merely an osteitis, but an

osteomyelitis. The symptoms have not approached the severity of those of acute osteomyelitis. The child will allow himself to be lifted, and, after pacifying him, I could move the hip and jar the thigh-bone without causing complaint. The slightest attempt at such manipulation in acute osteomyelitis would have caused intense agony. I think we must conclude that if there is anything of the nature of osteitis it is localized and slight. The movement of the joint, to which the child submitted, makes it improbable that a synovitis exists, although we may imagine that at this stage the tenderness has passed away. But what has principally attracted both Dr. Bartow's attention and my own is the swelling and pain at the outer and posterior aspect of the joint under the gluteus maximus. For the sake of a more careful examination the child has been chloroformed in spite of the persistence of the whooping-cough, as I believe that the condition about the hip is a sufficiently urgent demand for exploration, and, if need be, surgical interference. It seems to me that, beneath the thick gluteal covering, I find fluctuation. Further exploration should be made, and we will disinfect this region preparatory to incision. The red marks which you see on the buttocks are due to an early scald, and have no significance for our present purposes. With reference to the etiology of the abscess—if there be an abscess—it must be due to the entrance of bacteria, and it is interesting to note that the child has recently had several little abrasions of the toes. Even slight injuries of the feet are sometimes followed by the conveyance of micro-organisms to the groin and neighboring parts by the lymphatics, followed by the development of abscesses.

Not because I am afraid of the result of an incision, but because in ordinary private practice, in which most of you will engage, caution is necessary, I will illustrate to you the preliminary use of the exploring-needle and syringe to make sure of the presence of pus. A little thick pus is withdrawn, confirming our diagnosis. Now, on making a free opening with the knife, I find quite a large abscess-cavity deep down beneath the muscles of the buttocks. Notice that I have followed the general rule applying to all operations in this region, to make the incision as far as possible from the anus. It is necessary to make a counter-opening to provide for free drainage, and this I do on a level with and a little to the outside of the tuberosity of the ischium. While I come down to periosteum, I do not find bare bone indicating bone-disease, nor is the capsule of the joint distended, as it would be if there were an effusion in the synovial sac. The pain, fever, and general symptoms which the child has manifested can be accounted for by this extra-articular collection of pus. The cavity is disinfected as thoroughly as possible with the hydrogen dioxide spray, which causes a frothing and bubbling at both orifices. A tent of zinc oxid-gauze is inserted, and over the wounds will be applied a simple antiseptic dressing.

FRACTURE OF TIBIA, FIBULA, AND FEMUR.

This patient is a boy, ten years old, who, three and a half months ago, was knocked down by a horse, and sustained a compound fracture of both bones of the leg and a simple fracture of the upper portion of the femur. His condition was so serious on account of the extensive

laceration of the soft parts and the shock that we were prevented from doing what we wished to do. Traction could not be applied to the lower fragment of the femur on account of the condition of the leg. By dint of a good deal of effort—for the boy was hard to control—the fractured bones of the leg were held in place and have united. There remains a little ulceration marking the site of the laceration of the soft parts. The fracture of the femur has resulted in some angular deformity nearly as high as the trochanter, and there is a somewhat unsightly projection at this point. The operation to day is to relieve this deformity. Whether there is simply a projection to be chiselled off, or whether it will seem best to make a Macewen osteotomy, break the bone, straighten it, and apply traction, I cannot determine at present. The leg will now allow the application of a traction-apparatus. Examining the parts under complete anesthesia, I find that there is an excessive deposit of callus all around the bone at the site of the fracture. It is not, however, an exostosis in the proper sense of the word. Under these circumstances, if nothing were done to remedy the deformity, Nature would probably try to relieve the interference with muscular movements by developing an adventitious bursa, a "cyst of new formation," to enable the muscles to slide over the projection. I see no indication for rebreaking the bone, as the contour of the limb will be sufficiently restored if I cut down and remove some of the excess of callus with the chisel. At a later date it may be expedient to hasten the healing of the ulcer on the leg by skin-grafting.

[The removal of the callus was done as indicated and the wound dressed aseptically.]

PARAPLEGIA FROM POTT'S DISEASE.

This case illustrates the results of pressure upon the spinal cord, due, not to injury, but to the insidious progress of disease. The patient is a little girl, aged eight, whose mother has brought her to the hospital to seek relief. Sensation is not entirely gone, for the child feels when I tickle the sole of the foot. So far as any volitional effort is concerned, she makes none, so far as I can discover, to raise the leg, though there is a slight reflex from the irritation of the foot. Holding her upright, she cannot aid in the least in maintaining her position. Even as she sits on the table she supports herself with her hands. She complains of pain, particularly at night. The explanation of these symptoms is found on inspecting her back. There is a marked gibbosity of the dorsal spine, technically called a kyphosis. It is not quite regular, and it does not straighten out when I lift her by the shoulders. The intermittent pain, felt especially at night, is an almost constant feature of such a disease. Without calling the child's attention to the movement, I press down on her head. Rather to my surprise she makes no complaint of pain. If the disease were in the cervical region the slightest pressure on the head would certainly cause pain. From the rigidity of the spinal muscles, from the care with which the child protects herself from every jar, there is no difficulty in determining that properly directed pressure would cause pain. The diagnosis is Pott's disease of the spine, or tuberculous spondylitis. Now, what relation has this disease of the bones to the paralysis? Simply

the relation of cause to effect. The spinal canal has a very slight backward curvature in the dorsal region, but when it is kinked by the giving way of carious vertebræ its lumen is closed very much as a rubber tube would be collapsed by bending. The paraplegia is simply the compression-paralysis of Pott's disease.

What can be done for its relief? Drugs will do little except to promote better nutrition and to regulate excretion. The muscles of the legs and the lower part of the body are idle, and they will atrophy unless they are permitted or made to work. We can cause them to contract and to receive proper nutrition by electricity and massage. To permit them to perform their natural function at the will of the patient we must straighten out the kink in the spinal canal, or, at least, prevent its becoming worse, and thus allow the spinal cord to adapt itself to its new surroundings. This I can effect by putting on a plaster-of-Paris jacket, with a jury-mast to keep the weight of the head off the dorsal vertebræ. The possibility of operation must be considered. On purely theoretic grounds it would be comparatively easy to cut down on the site of the compression and remove the pressure. Practically, the operation would not be of great difficulty to the surgeon, but it would be a very serious danger to an emaciated, cachectic patient like this. There is not only the shock of the operation, but the drain on the vitality, of a slow recovery, and the liability to septic infection. Moreover, the success of the operation is not certain. If there be nerve-degeneration, there is less to be hoped for from the relief of pressure. It is difficult to say whether the degeneration of nerve-tissue has yet occurred. If the compression of the spinal cord had occurred rapidly, even with this degree of paralysis, there would not be the same reason to fear serious degeneration. I have not, however, absolutely given up the idea of operating, but I shall first try the conservative plan, which we should prefer in the case of our own children.

PATHOLOGIC NOTE.

DUPLICATION OF THE SPINAL CORD, AS A RESULT OF POST-MORTEM INJURY.

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RECENT studies of the artefacts of the nervous system by Van Gieson, some of the results of which were presented at a meeting of the New York Neurological Society in June, 1892, and subsequently embodied in a series of articles in the *New York Medical Journal*, place in an entirely different light many of the heretofore recorded cases of congenital abnormality of the spinal cord. Van Gieson, after an exhaustive review of the cases of malformation of the cord reported prior to 1892, together with an experimental study of the subject, including the examination of a large number of cords unwittingly injured during removal, and others in which it was attempted by intentional bruising and rough treatment to reproduce some of the appearances previously regarded as of ante-mortem origin, reaches the conclusion that of the thirty-one cases of supposedly congenital malformation recorded from 1878 to 1892, only six are in-

stances of true developmental defect; the remaining twenty-five, including cases of heterotopia of the gray and white substances, and several instances of most remarkable doubling of the cord, reported by Fürstner, Zacher, Drummond, Schiefferdecker, Feist, Kronthal, and others, being nothing more than topographic alterations in the nervous tissues produced by bruises and other injuries inflicted during unskilled or careless removal of the cord from its bony canal, or by rough handling after its extraction.

When it is considered that the literature of these pseudo-malformations had attained to quite respectable proportions, and that the misconception of their true nature, passing unchallenged for many years, had already given rise to erroneous conclusions as to the frequency of spinal-cord malformations in general, and of their influence in the causation of disease, the value of Van Gieson's work may be appreciated.

The case which is made the subject of this paper offers an apt illustration of the facility with which the most bizarre and misleading appearances may be produced by unintentional injury of the cord during post-mortem examination; and but for Van Gieson's rational explanation of the real character of the apparent anomalies noted, it would in all probability have been added to the twenty-five instances of spurious "congenital malformation" already recorded.

The patient was an epileptic imbecile girl, subject to convulsions from early childhood, small, and misshapen; the cranium, face, and body were asymmetric, the right side the smaller; there was a slight lateral curvature of the vertebral column, with marked displacement of the spines of the eleventh and twelfth dorsal vertebræ. The convulsive movements usually began and were more severe upon the right (the smaller) side. The tendon-reflexes were exaggerated, the more markedly so upon the right side; a distinct ankle-clonus existed on this side. The gait was shambling and unsteady, but not characteristic. The patient was irritable, possessed a limited vocabulary and very slight intelligence. She died in her twenty-sixth year, of tuberculosis of the lungs.

The autopsy, held five hours after death, showed extensive and extreme sclerosis of the first and second temporal convolutions and of the cornu ammonis of the left hemisphere; the *right* lateral lobe of the cerebellum was smaller than the left, and its posterior portion shrunken and sclerosed. The discovery of these lesions led to a more than ordinarily careful removal of the spinal cord, this being accomplished without appreciable injury to the organ, save at the point of displacement of the eleventh and twelfth vertebræ, where some difficulty was experienced in getting through the laminæ, and a diagonal gash in the dura and enclosed cord was inflicted by the chisel. After the cord, enclosed in its membranes, was taken out, it was observed that at the dorso-lumbar junction the cord seemed remarkably small, and this fact was noted in the written report of the autopsy. This abnormally contracted portion extended from the point of injury upward for about one and one-fourth inches; the small cord could be distinctly felt through the relaxed dura; at the upper extremity of the contracted segment the cord became unduly large, and the dura seeming tensely distended by its contents; this swelling gradually diminished above, and within a distance of

one and one-half inches the cord had regained its natural size. It was conjectured that this abnormality might in some way be associated with the deformity of the spinal column and the symptoms of a spinal lesion noted during life. The tissue, seeming soft, the cord was placed in Müller's fluid for hardening without further examination or handling, a few transverse cuts being previously made through cord and dura, but leaving untouched the seat of the supposed malformation. The process of hardening was completed in alcohol, and the cord then subjected to careful inspection before dividing it into convenient bits for section-cutting.

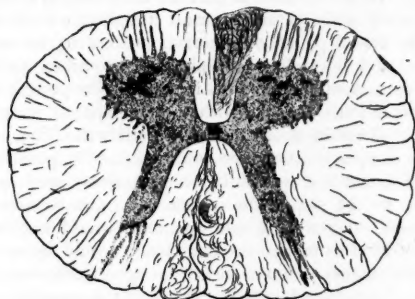
Transverse cuts through the dura and the cord at the point of greatest apparent hypertrophy showed the seemingly normal and uninjured dorsal cord crowded to one side, and the entire space between the cord and the dura filled by a crescent-shaped mass of material, softer and paler than the cord, with a somewhat mottled surface. The cord and the outlying mass were apparently enveloped in the same unbroken arachno-pial sheath. Sections above and below this point discovered the extraneous crescent to thin away—gradually above, abruptly below, where it terminated in the small contracted portion previously mentioned. A cross cut through this contracted area disclosed the appearance of a cord shrunk to one-third its normal size, and destitute of gray matter; below, at the point where the cord resumed its normal dimensions, the wound made by the chisel, with some bruising and extrusion of the nervous tissue, was noted; over the remainder of the contracted part, as at the swelling above, the arachno-pial covering seemed uninjured. A transverse section at the junction of the swollen segment with the seemingly atrophic segment showed a considerable distortion of the gray horns of the cord and some pale splotches in the white tissue; several similar but smaller whitish patches were noted in the columns of Goll in the upper portion of the cervical enlargement. Throughout the remainder of its length the cord seemed to the naked eye to be of normal character, excepting for the disintegration observed at the point of injury in the upper lumbar region, previously referred to.

Microscopic examination of a section prepared from tissue taken from the abnormally enlarged segment resulted in the unexpected discovery that the extraneous crescent was composed of nervous tissue, gray and white, the gray arranged so as to present a rude imitation of the normal disposition of the gray matter of the spinal cord, the white showing irregular bundles of nerve-fibers interspersed between masses of apparently unorganized myelinic material; in brief, an instance of partial duplication of the spinal cord had been discovered. Some regret was felt that a cord exhibiting so interesting and unusual an anomaly should have been injured just at the seat of the malformation, and a detailed study of the organ was undertaken. The cord was cut into half-inch pieces and sections made representing practically the entire length of the cord; at the swollen and contracted parts special care was exercised, and sections in series to the number of many hundreds were made and examined.

Beginning above, the first abnormality discovered was in the upper portion of the cervical enlargement, where, in the columns of Goll, the irregular pale spots had been noted; these the microscope showed to be due to an ap-

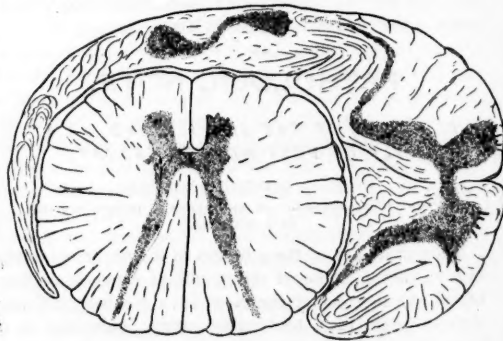
parently anomalous course of some of the bundles of nerve-fibers; the fibers, instead of running longitudinally and showing their cut ends only in a cross-section of the cord, pursued a more or less horizontal course, and were traceable for considerable distances across the sections; some fibers pursued a peculiar gyral or corkscrew like course; some ran in straight bundles, the fibers lying parallel; some exhibited an extremely irregular arrangement. The abnormality was entirely confined to the columns of Goll, and to the left anterior pyramidal tract (Fig. 1). From this point to the begin-

FIG. 1.



ning of the abnormal swelling in the lower dorsal region no lesions or abnormalities meriting notice were detected. The sections then bring into view the first evidence of the outlying crescent of nerve-tissue in two separate masses of nerve-material, composed in part of bundles of medullated nerve-fibers, in part of apparently unformed myelinic material, staining deeply by the Weigert hematoxylin method. A little lower down these two

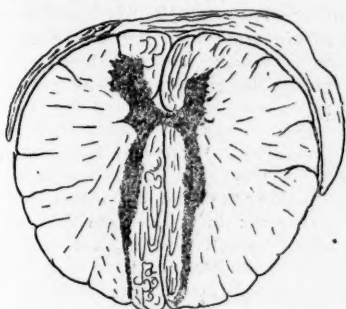
FIG. 2.



masses become united, and two small patches of gray substance make their appearance. A short distance below this point the gray and white masses assume somewhat the appearance of a much-distorted anterior half of a spinal cord, which likeness becomes more pronounced when the point of greatest apparent hypertrophy is reached (Fig. 2). Here the supernumerary cord is well shown, although there is much distortion of the gray horns and many abnormalities of arrangement in the white tissue. The gray horns are larger than the gray horns of that portion of the dorsal cord around which the heterogeneous tissue has disposed itself, and the surface-area of

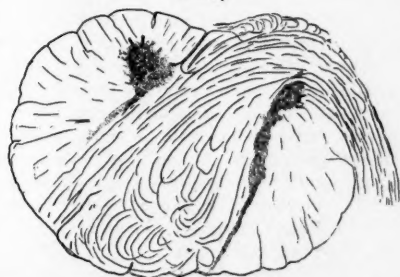
a transverse section of the accessory cord is somewhat greater than that of the dorsal cord. Below (Fig. 2) the abnormal crescent diminishes rapidly in thickness, and the cord shows the first indications of intrinsic malformation; the posterior gray horns become unduly ap-

FIG. 3.



proximated, and some distortion of the white substance, notably in the posterior columns and on each side of the anterior median fissure, appears (Fig. 3). Immediately below this point the distortion of the gray and white substances of the cord becomes extreme; large bundles of fibers run diagonally across the section, pass through the ruptured pia, and apparently become continuous with the extraneous crescent above (Fig. 4). The cord then

FIG. 4.



becomes contracted, and a transverse section shows an appearance but little resembling a spinal cord; there is simply a mass of irregularly disposed white fibers and myelinic material contained in a collapsed and shrunken arachno-pia; at the lower extremity of this shrunken part the wound inflicted by the chisel in the dura, pia, and cord is situated, and some of the cord-substance is extruded through the gash; from a point immediately below the wound to the extremity of the cord no lesion is discovered.

The features of noteworthy interest, in addition to the topographic changes illustrated in the diagrams and in the foregoing description are these: The extraneous crescent is continuous below with the mass of nerve-tissue passing out of the cord, shown in Fig. 4; and here the pia is ruptured; the extruded material and the entire mass of the outlying crescent throughout its length occupies the "sub-arachnoid space"; the arachnoid is nowhere broken, save at the point of chisel-injury, some

distance below this. The heterogeneous crescent gives origin to no nerve-roots, and no bloodvessels can be traced into it.

Many hours were spent in an attempt to solve the problem of the development of this accessory cord in its peculiar situation, and of the abnormal contraction and absence of gray matter in the cord immediately below this. In looking up the literature of the subject, reference to partial doublings, somewhat resembling this case, was found in one or two of the text-books and in the writings of several German authors. The results of injury in the upper lumbar region were recognized, but it was not deemed possible that so remarkable a duplication of the cord could be produced by injury of any kind or degree. Being, however, unable to arrive at any intelligible solution of the puzzle, the whole matter was put aside until recently, when, through the courtesy of Dr. Welch, of the Johns Hopkins University, to whom a section of the cord was submitted, Van Gieson's monograph was brought to notice.

In the light of Van Gieson's researches the case is made plain. The entire abnormality is a *bruise artefact*.

The spinal cord is of especially difficult access at the dorso-lumbar junction, and it is in exactly this locality that most of the reported duplications of the cord have been situated. In the case in hand the displacement of the vertebræ made the severance of their laminae a matter of peculiar difficulty; the chisel employed in effecting this by some mishap cut through the dura and into the pia-arachnoid and the cord itself. The spinal dura is a tough and by no means easily lacerated membrane, so that a cut through it with a chisel not particularly sharp, presupposes the application of considerable force; in this instance the cord was probably severely bruised and a powerful squeeze applied to it before the dura gave way. This violence was sufficient to detach a fragment of cord-tissue, and, rupturing the pia, forced the loosened segment upward into the sub-arachnoid space, Fig. 4 representing the point of exit. The distortions and topographic anomalies in the cord, illustrated in Fig. 3, are doubtless results of the same violence which caused the invagination. The lesser abnormalities, shown in Fig. 1, are due to an appreciated small bruise at this point (upper portion of the cervical enlargement). The invaginated crescent, of course, shows much disintegration of its structural elements and alterations in the relations of its gray and white substances; it is torn loose from its nerve-roots and nutrient vessels. The abundant formless myelinic material mentioned as taking a deep Weigert stain is derived from the crushed and broken myelin-sheaths of the white nerve-fibers. The cord, apparently shrunken to one-third its normal size, is the column of white substance remaining after the separation and upward invagination of the portion which goes to form the distorted crescent.

During the past several years probably twenty-five or more spinal cords have been removed in our autopsy-room in about the same manner as the one under consideration, and sections from them studied with greater or less care. In no one of these cases, however, has any appearance at all resembling those above sketched been discovered. Several of the cords have been injured in removal, but the results of injury have always been

easily recognizable as such; and the case immediately under consideration is the only one in which any such deceptive duplication has been unearthed.

It is a matter of some practical importance to workers in the pathology of the nervous system that the fact be recognized that, however rarely, such remarkable doublings as the one here reported do occur as a result of unintentional violence to the cord, and perchance when least expected.

CONGENITAL ABSENCE OF THE GALL-BLADDER.¹

By AUGUSTUS A. ESHNER, M.D.,

ADJUNCT PROFESSOR OF CLINICAL MEDICINE IN THE PHILADELPHIA POLYCLINIC.

THE subject from which were obtained the specimens to be presented had been under the care of my friend Dr. C. F. Pettibone, upon whose invitation I undertook the post-mortem examination, and by whose courtesy and with whose coöperation this report is made. The case occurred in a rachitic, colored child, two years old, that had never walked unsupported and had presented no symptoms suggestive of any anatomic peculiarity referable either to the biliary apparatus or to other structures. The child had just gotten its first tooth; its ribs were beaded; its chest flattened laterally; the top of its head but slightly convex and its forehead square. It had not yet been taken from its mother's breast and had presented no noteworthy derangement of the digestive apparatus. The child was the outcome of the first pregnancy of the mother, and no family history of syphilis was obtained, although the previous wife of the father had had two miscarriages. The little patient came under observation on account of a slight but rather persistent cough, with occasional dyspnea at night. The bowels were moved several times daily and the stools were pale. There was no jaundice. Upon physical examination no impairment of the pulmonary percussion-resonance was detected, but numerous fine râles were heard posteriorly and at the bases of the lungs. The heart appeared somewhat displaced downward and to the right, but the action was rhythmic and the sounds clear.

The child was lost to observation for a short time and nothing was heard of it until information came that it had died and a certificate of death was asked for. Upon post-mortem examination the epicardium was found to be injected and the pericardial cavity to contain an excess of clear fluid. The heart was large and distended with blood. Its cavities were dilated, but the valves and orifices presented no abnormality. Both lungs were involved in an extensive, widely distributed broncho-pneumonia, with, in places, some compensatory emphysema. The angulation and hyperplasia at the junction of the true ribs with their cartilages was particularly marked upon the inner surface. The kidneys presented a striking pallor of the medullary pyramids. A small supernumerary spleen was present. The bronchial and mesenteric glands were enlarged. The ileum was free from ulceration. The liver appeared of normal size and condition. It presented a whitish nodule at its anterior margin, histo-

logic examination of sections from which shows the remains of hepatic parenchyma, in part in a state of fatty degeneration, together with hyperplasia of connective tissue, accumulations of round cells, and in places homogeneous loss of structure—changes that I take to be of syphilitic origin. The sections that I exhibit show the presence of the hepatic, portal, and biliary vessels. No gall-bladder could, however, be found, either attached to or detached from the liver, or even contained within the structure of this organ, and, as I show you, the usual fissure for the gall-bladder is wanting and there is nothing suggestive of the previous presence of this viscus. Unfortunately the relations of the hepatic artery, the portal vein, and the hepatic ducts were not attentively observed *in situ*. The usual papilla was found in the duodenum, marking the point of entrance of the choledoch and pancreatic ducts, and from this point a duct could be traced upward for a short distance, but the ducts issuing from the liver could not be isolated. The portal vein is perfectly evident and displays no abnormality. There is every reason to believe that the blood-supply of the liver was normal and that the functional activity of the organ was in no way interfered with. The case thus clearly resolves itself into one of agenesis of the gall-bladder.

That absence of the gall-bladder is not incompatible with life is demonstrated not only by cases of this kind, in which there is a congenital deficiency of that viscus, and by the cases in which it is wanting as a result of pathologic causes post-natal or as a result of surgical interference, but also by the further fact that it is normally wanting in some animals, as, for instance, the elephant, the rhinoceros, the camel, the goat, the deer, some species of fish, some birds, and some rodents.¹ Its congenital absence in man seems, however, to be a rare condition. In a partial survey of the literature of the subject I have been able to find but few cases of the kind. The number becomes swelled if cases be included in which the gall-bladder was absent obviously or probably as the result of obliterative processes of one kind or another. I append in chronologic sequence a brief summary of the cases that I have gathered. There are a few others to which I have not had access.

Huber² reports having found an absence of the gall-bladder in the dead body of a woman sixty years old. The place of the viscus seemed to be supplied by a preternaturally large hepatic duct, which opened into the duodenum in the usual situation, and the coats of which were greatly thickened, and whose lining membrane presented a villous appearance, with numerous small spots believed to be follicles. The biliary ducts were likewise enlarged.

Cholmeley³ records the case of an infant that was noticed to be sallow at birth and soon afterward became intensely icteric. The stools were white and pasty. Death took place at the age of five weeks, being pre-

¹ The gall-bladder may be viewed as but an elaboration of structure dependent upon some differentiation of function, representing, as it were, but a diverticulum of the union of the biliary ducts of the liver.

² The Philosophical Transactions of the Royal Society of London, vol. ix, from 1744 to 1749, p. 649. London, 1809.

³ Medical Transactions of the College of Physicians of London, 1820, vol. vi, p. 50.

¹ Read before the Philadelphia Pathological Society, April 12, 1894.

ceded by convulsions. Upon post-mortem examination the usual depression in the liver for the gall-bladder was found present, but the viscus itself was replaced by a narrow, impervious cord. The pancreas was enlarged and indurated. It is stated that the transmission of bile into the duodenum was prevented by pressure of the pancreas on the common duct. Cholmeley cites from Morgagni an instance in which the gall-bladder was wanting, but in which two livers were present.

Gaultier¹ has reported the case of a man, aged sixty, with jaundice, who died of tuberculosis, and in whom no trace of a gall-bladder could be found. The duodenum, however, was adherent to the liver by means of fibrous bands. In the bowel opposite the point of entrance of the choledoch duct a large biliary calculus was found. This duct passed directly into the liver without presenting any diverticulum corresponding to a cystic duct.

Baker² found the gall-bladder wanting in a subject that came into the dissecting-room. A puckered appearance of the liver in the usual situation of the gall-bladder suggested the destruction of this viscus by some suppurative process.

Bergmann³ has reported the case of a woman who had long been insane, and in whom after death the left lung was found replaced by two insignificant fleshy masses, the liver enlarged, and the gall-bladder replaced by a small fibrous mass. From the liver a membranous canal passed to the duodenum.

Bergmann cites a case recorded by L'Emery⁴ of absence of the gall-bladder, the bile passing from the liver to the duodenum through numerous small ducts.

Canton⁵ has reported the case of a woman, sixty-five years old, dead of some "disease of the brain," and in whom the gall-bladder was wanting, although a shallow groove for its accommodation was present in the usual situation. The liver was reduced in size. The right and left hepatic ducts were of usual size and diameter, uniting at an angle below the transverse fissure of the liver to form a common choledoch duct of unusual length and caliber, and whose lining membrane presented the characters of the mucous wall of the gall-bladder.

Canton refers also to a case, reported by E. Wilson, of a fetus born at term that lived but a few hours, and presented a number of peculiarities, the most noteworthy of which was an absence of the gall-bladder. Reference is also made to two specimens in the Museum of the Royal College of Surgeons, in one of which the gall-bladder and the hepatic duct are absent, and in the other of which the gall-bladder was replaced by fibrous tissue.

Thomas⁶ has reported the case of an infant five months old that had presented jaundice from the second or third day of life. The child was able to suckle, but vomited a little daily. The bowels were irregular; the stools were white or clay-colored. A week before death anasarca and ascites developed. Upon post-mortem examination not even the rudiments of gall-bladder or cystic

or hepatic ducts could be found. The liver weighed fourteen ounces; microscopically its cells were found filled with yellow, granular matter, without much fat. The mesenteric glands were enlarged. Two glands in the longitudinal fissure were softened.

Trimble¹ reports the case of a woman, fifty-five years old, who for several months had presented epigastric pain, nausea, occasional vomiting, furred tongue, pyrosis, anorexia, constipation, emaciation, and ascites. After death there were found inflammatory adhesions about the pancreatic and choledoch ducts. The liver was reduced in size, and in one situation attached to the pancreas. Here it was of cartilaginous hardness, and on section was found to contain a gall-stone imbedded in the common choledoch duct. Careful examination failed to disclose the presence of even a vestige of the gall-bladder.

In 1860 Simpson,² before the Edinburgh Obstetrical Society, reported the case of a child four weeks old presenting a condition with features both of erysipelas and scleroderma. In the sixth week vomiting suddenly set in, and was soon followed by death. Upon post-mortem examination there were found present evidences of peritonitis. The gall-bladder could not be found, and there was no depression corresponding to its usual site. The common choledoch duct opened into the duodenum in its usual situation. The duct could be traced backward to the transverse fissure, where it broke up into the hepatic ducts.

In 1865 Sands,³ before the New York Pathological Society, reported finding in the dissecting-room, in a tuberculous male subject about twenty years old, a liver without a gall-bladder and without a fissure for its lodgment. The liver was small, weighing one and three-fourths pounds, and its quadrate lobe was wanting.

Lynche⁴ has recorded the case of an infant, eleven months old, in which icterus made its appearance a few days after birth, the stools presenting a dead-white appearance. Later on the child manifested a tendency to hemorrhage. After death the liver was found to be large, weighing one pound and two ounces. The hepatic ducts were small, but there was no trace of a gall-bladder, its place appeared to be taken by an enlarged cystic duct.

Rambault and Schachmann⁵ have reported the case of a paretic dement who after death presented, in addition to the classic lesions of paretic dementia, a small liver with absence of the gall-bladder, the fossa for this viscus being replaced by a shallow fissure. There was no indication of a cystic duct. The hepatic ducts presented no abnormality. During life there had been no symptoms suggestive of the absence of the gall-bladder.

It will be seen, even on superficial analysis of the cases collated, that in most of them the absence of the gall-bladder was associated with conditions that point to obliteration of a previously existing viscus, rather than to a condition of agenesis, such as I conceive to have been present in the case now reported.

¹ Journal de Médecine hebdomadaire, July 11, 1829, tome iv, No. 41, p. 61.

² North American Archives of Medicine and Surgical Science, February, 1835, vol. i, No. 5, p. 307.

³ Hannover'sche Annalen für die gesammte Heilkunde, 1836, B. i, p. 553.

⁴ Mém. de l'Acad. des Sci., 1701.

⁵ Lancet, 1847, vol. ii, p. 406.

⁶ Medical Times, July, 1848, vol. xvii, No. 458, p. 171.

¹ New Jersey Medical Reports and Transactions, 1850, vol. iii, p. 303.

² Edinburgh Medical Journal, 1861, vol. vi, part ii, p. 1045.

³ New York Medical Journal, June, 1865, vol. i, p. 222.

⁴ Medical Press and Circular, 1875, n. s., xx, p. 362.

⁵ Bulletin de la Société Anatom. de Paris, 1882, lvii ann., 4e sér., tome vii, p. 499.

MEDICAL PROGRESS.

The Symptomatology of Syringomyelia.—SCHLESINGER (*Neurolog. Centralbl.*, 1893; *Centralbl. f. Nervenheilk. u. Psychiatrie*, March, 1894, p. 151) directs attention to several symptoms of syringomyelia to which little attention has heretofore been paid. Among these are certain paralyses of the ocular apparatus, such as are observed in the course of posterior spinal sclerosis, and are frequently but transitory. There may also be laryngeal palsies, assuming a prominent place in the manifestations of bulbar involvement, usually insidious in development and chronic in course. These laryngeal disturbances are usually motor; paresthesiæ are uncommon; diminution of the laryngeal reflex irritability is sometimes present, and sometimes the sense of pain and the thermal sense are diminished. The motor derangement consists more frequently in interference with phonation than in disturbances of respiration. Unilateral recurrent palsy is commonest; less common is unilateral posticus palsy. The pressure-sense sometimes undergoes a peculiar change, the appreciation of pressure upon the cutaneous surface being greatly impaired or entirely abolished, while no defect is observed if the pressure-sense is tested in the ordinary way.

The Function of the Muscular Coat of the Bladder in Normal Micturition.—In an experimental research, GENOUVILLE (*Archives de Physiologie Normale et Pathologique*, 5e sér., t. vi, No. 2, p. 322) found that the vesical orifice of the bladder is normally opened by contraction of the unstriated muscular tunic, and that the contraction of this muscle is necessary to the expulsion of the urine. The contraction of the abdominal muscles may aid this action, but is not indispensable, and cannot replace it. Although volition seems to be directly concerned in the act of micturition, it acts rather by causing, through a psychic act, reflex contraction of the muscular coat of the bladder. Ordinarily, the contraction of the muscular coat is the result of a reflex having its point of departure in a special sensibility of the bladder to tension, the two properties of the bladder, contractility and sensibility, being intimately related, and being manifested in perfect accord in the physiologic activity of the viscus.

Glycosuria of Nasal Origin.—At the recent International Medical Congress BAYER (*Wiener medicin. Presse*, 1894, No. 15, p. 576), reported a case of occlusion of the nares, attended with various trophic disorders and with glycosuria, in which the symptoms disappeared after the removal of the nasal obstruction. It is explained that in cases of this kind the occurrence of the glycosuria is to be ascribed to the diminished oxidation and the circulatory disturbance resulting from interference with respiration and to a reflex effect upon the medulla oblongata.

THERAPEUTIC NOTES.

Applications of Guaiacol in the Treatment of Orchitis.—At a recent meeting of the Société Médicale des Hôpitaux BALZER and LACOUR (*La Méd. Moderne*, 1894, No. 28, p. 444) reported favorable results from applications of

guaiacol in the treatment of orchitis. The application was soon followed by relief of pain and subsidence of the general symptoms, including fever, so that repose and sleep became possible. In the inguinal region pure guaiacol was used, but upon the scrotum an ointment containing from 2 to 5 parts of guaiacol to 30 of vaselin was applied. The applications gave rise to some burning pain, but all distress disappeared in the course of a few hours. The pain was sometimes permanently relieved after the first application, but as a rule two were required daily. As soon as the pain had ceased the applications were withheld, as they did not appear to exert any resolving influence upon the inflammatory exudate. The applications often induced a slight erythema of the scrotum, followed by desquamation and sometimes by fissures. It is suggested that the good effects are brought about principally by a reflex influence upon the terminations of the cutaneous nerves. It is admitted that cutaneous and pulmonary absorption plays a certain part, but the rapidity of the action indicates a local effect.

Potassium Bichromate in the Treatment of Various Gastric Affections.—FRASER (*Lancet*, No. 3685, p. 922) reports the successful employment of potassium bichromate in eighteen cases of various forms of dyspepsia unassociated with evidence of gastric ulcer, and in ten other cases in which distinctive symptoms of ulcer had been present at some previous time. The drug was administered in pill or in solution and on an empty stomach in doses of from one-sixth to one-twelfth of a grain twice or thrice daily, the smaller dose being, as a rule, found sufficient. The remedy showed itself capable of relieving and, often in a short time, of removing the entire group of symptoms (excepting anemia and constipation) encountered in dyspepsia, and especially pain, nausea, vomiting, and gastric tenderness. The drug also displayed anti-putrefactive properties. The effects in acute gastric ulceration with hematemesis were not favorable.

Ammonium Sulphichthyolate in the Treatment of Pulmonary Tuberculosis.—After an experience with more than one hundred cases of pulmonary tuberculosis during a period of longer than two years, COHN (*Deutsche medicin. Wochenschrift*, 1894, No. 14, p. 330) recommends the administration of ammonium sulphichthyolate, mixed with an equal part of water, in doses of from four to forty drops thrice daily. The drug is best given in a generous quantity of water before meals, and the dose is increased gradually one drop of the mixture daily. It may also, though not with the same advantage, be given in pill-form or by inhalation.

Quinin for Enuresis.—POTTS (*Therapeutic Gazette*, vol. xviii, No. 4, p. 217) has observed that in cases of chorea treated with full doses of quinin a coexisting enuresis was also corrected as long as the active administration of the drug was continued. It is suggested that the efficiency of the remedy depends in the case of enuresis, as in that of chorea, upon a stimulating influence exerted upon the inhibitory apparatus of the spinal cord. While the result is a speedy one, it is not a maintained one, and additional tonic measures are required to render the relief permanent.

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SATURDAY, MAY 19, 1894.

TWO WRONGS DO NOT MAKE ONE RIGHT.

THE confusion of mind with which the questions relating to revision of the Code of Ethics of the American Medical Association were approached by the estimable members of the majority of the Committee on Revision is well illustrated by a letter from a justly and highly honored member of that committee, DR. LEARTUS CONNOR, of Detroit, published in the *Journal of the American Medical Association* of May 5th.

In that communication it is apparently assumed that criticism directed against the report of the majority of the committee has been directed against the personal character and motives of the members; and in the arguments brought to sustain the work of the revisers and to defend it against critics, the personality of the critics is similarly made a subject of comment.

No good result can be thus reached. The question is one of principles, not of persons. We have never doubted the probity of the revisers or their honesty of purpose, and we shall continue to honor them as they deserve as men and as physicians, although we must reject them as guides upon questions of general medical ethics. Their character is good, but their work is abominably bad; and it is their bad work, not their good character, that we

are discussing and that we urge the members of the American Medical Association to "vote down."

On the other hand, the facts that one of those who oppose the report of the majority of the committee is a professor of medicine, and that another is an authority upon genito-urinary diseases, and a third is the author of a medical book, have likewise nothing whatever to do with the questions under discussion. If these gentlemen have, in teaching or writing to the best of their ability, done anything at variance with the written Code, or with the stricter unwritten code that guides honorable physicians, let them be held to strict account for such action; but let us not be led astray from the matter really before us through the obtrusion of irrelevant issues.

To consider now, stripped of all personal allusion, the argument made for the proposed revision, there will be little difficulty in exposing its weakness.

It is said that in "no single one" of the criticisms of the proposed revision "is a single reason given to support the belief that the adoption of the committee's report would fail to benefit the profession."

This statement evinces a singular blindness. THE MEDICAL NEWS has given *three* cogent reasons out of many possible ones why the adoption of the report would fail to benefit the profession:

1. Because it is an unconditional surrender to quacks and pathists.
2. Because it is an unconditional surrender to nostrum-venders and certificate-mongers.
3. Because it is an unconditional surrender to advertisers and commercial specialists.

It is further said that the proposed revision differs from the present Code "mainly by giving greater liberty of action to the individual physician—only this and nothing more." Of course. What more is wanted? It gives liberty to do what is now prohibited. If it did not, no one would urge its adoption and no one would oppose it.

The object of a code is to impose restraints—or, rather, to state what restraints right-minded men impose upon themselves. If we object to restraint we must abolish the Code *in toto*; that would give still greater "liberty of action to the individual." But if we have a code and its concomitant restraints, that code must not give "liberty" to any action of questionable propriety.

THE MEDICAL NEWS would vastly prefer "No Code" to the mutilated Code of the majority of the committee. Those "who study the law that they

may do everything not punishable" might then alter their outward conduct for the worse; but those who refrain from doing evil because it is evil, and not from fear of written statutes, would continue to avoid doing the things the committee seeks to legalize.

But let us see what reason is given for the proposed abolition of restraints: "The committee believed that with the changes incident to the last forty years, especially the better general and technical education prevailing both among profession and people, it would be wise to provide for an increase of the personal liberty accorded to the individual physician."

To this we would reply by a query: How many years does it take for a wrong to "change incidentally" into a right? By the nomination of forty years, does the committee mean to imply that there is a definite rate *per annum*, say two and one-half *per cent.*, at which dishonor becomes honorable and mendacity truthful? The Decalogue was proclaimed several thousand and forty years ago. At what annual rate should the restraints which that Code places upon "individual liberty of action" be removed? Surely the committee does not need to be told that the difference between right and wrong is not a question of years! Neither is it a question of education, whether "general" or "technical." We confess we do not clearly understand the contention as to education. Are well-educated men exempted from the restraints of the present Code? Or were there no well-educated physicians in America forty years ago? Or was it the lack of education "among the people" that rendered a code necessary then that is (partially) unnecessary now? We have always been simple enough to believe that increased education brought increased and not diminished responsibilities; that one might pardon in the ignorant what he would condemn in the instructed. Perhaps, however, this, too, has incidentally changed "in the last forty years."

And now we come to the questions really at issue. "The points of objection to the revision," it is said, "are: 1, the granting of increased liberty of professional association; 2, increased liberty in profiting by mechanical inventions; 3, an increased liberty of promoting professional acquaintance." To these euphemisms for (1) consulting with pathists of all kinds, (2) patenting instruments, and (3) advertising without restraint, the writer should have added (4) "increased liberty in profiting by" the traffic in nostrums and certificates.

THE MEDICAL NEWS has thus far said little as to patents, but it has called distinct attention to the effect of the alterations made in the section relating to patents and nostrums, in so far as the latter subject is concerned. In the article under review this subject is persistently and consistently ignored. Why? Is it because this is an "increase of liberty" that even the members of the committee are not prepared to defend?

Since our first writing upon the nostrum-question, in all the voluminous literature it has elicited we have yet to hear or read a single word of calm argument on the nostrum-side. Evasion of the issue or personal abuse is all that editors, contributors, or manufacturers' agents have yet produced. Here was a glorious opportunity for a frank and clear statement of the committee's reasons for endeavoring to remove the stigma from nostrum-using and nostrum-promoting. If anything decent could be said on that side, this was the time and place. We sincerely regret that the opportunity was not utilized.

To return to the arguments for "increased liberty":

1. *Professional association.* It is said that "the report does not dictate whom he [the physician] shall select . . . but affords him the liberty of making his own choice. . . . [It] would probably not alter in any respect the practical action of most physicians, but it is natural to suppose that all would feel better to be trusted more fully." Why, then, impose any restriction whatever? Why insist on "legal qualification"? Why insist on "good repute in the community"? If physicians are simply "to be trusted more fully," why the "more"? Why not trust us "fully" without restriction, "more" or less? A reputable physician will not select a disreputable consultant or law-breaking associate—so that the limitation as to "law-abiding and reputable" imposed by the committee becomes, when we talk of "trusting," simply insulting! The truth is, the committee wants to legalize consultation with homeopaths, and instead of saying so directly beats around the bush. There is only one proper way to effect this object, and that is to repeal the present prohibition against such consultation by a direct vote. Each voter will then know what he is voting on; and if the repeal be carried, the question will be relegated to the domain of individual conscience. As admitted, repeal "would probably not alter in any way the practical action of most physicians"; elevated public sentiment would be against consult-

ing with sectarians and quacks, and those who did so could not cite a platitudinous code in their defense.

2. *Patents.* "The report places the copyrighting of books and the patenting of mechanical appliances [and drugs?] used in medicine and surgery on the same basis. . . . It is strange that gentlemen . . . who have made lots of money out of the profession by securing copyrights . . . should kick against permitting the doctor who cannot write a book, but is able to invent a valuable instrument, from trying to make some money by his special talent."

In discussing the consultation question the element of money-making was not avowed; we therefore did not comment on it. Here, however, it comes undisguisedly to the front. Now, to do good work and be well paid for it is all right. We all want that. But to simply desire to "make some money out of the profession," by books or otherwise, is not a very "elevating" sentiment. We have in a previous editorial shown the difference between copyrights on books and patents on medicines and instruments, but will repeat for the committee's benefit, that *one is payment for instruction, while the other is tribute for permission to use a certain drug or instrument.* The copyright paid to the author of a book is exactly parallel with the fee paid a lecturer, or demonstrator, or instructor. The author teaches his reader how to do something, perhaps to make a diagnosis, or perhaps to perform an operation, or he imparts information as to the results of historic or scientific research, and he is justly entitled to payment for his labor. But, withal, he does not set up a monopoly; his opinions may be and are freely quoted, and thus made available to instruct many who never pay him a cent directly or indirectly.

On the other hand, one who patents a medicine or an instrument does set up a monopoly, and thereby exacts a tribute from each one who uses his instrument or his drug. For what is this payment made? For instruction? Not at all—but for permission to avail oneself of a certain method of treatment. It is but one step removed from nostrum-vending, and one is not surprised that a committee that defends the patenting of instruments and drugs should likewise remove the condemnation of the Code from the practice of using and recommending nostrums. But even granting, for argument's sake, that there is no difference between the

copyrighting of books and the patenting of instruments and medicines, what should be the proper course of the committee and the Association? To legalize one wrong because another is committed, or to prohibit both? And what has the personal authorship of Dr. X, Dr. Y, or Dr. Z to do with a question of moral principle? A cause strong in itself does not resort to the *argumentum ad hominem*.

3. *Advertising.* "Concerning the increase of liberty given by the report to physicians in making known to *their professional brethren* their special qualifications, physicians outside of hospitals, dispensaries, and medical colleges are permitted to follow the example of those inside of these institutions. It simply puts the entire profession upon the same plane in advertising itself (*sic*)."
[*Italics are ours.*]

Is this entirely ingenuous? Are cards and signs intended for the information of one's *professional brethren*? Do hospital physicians use cards and signs of the character proposed? Does any member of the committee sincerely believe that it would tend to "elevate the profession" to see such signs as, for example [if the dead giants named will forgive the association for the sake of the lesson]: DR. AGNEW, *Expert in Fractures and Amputations*; DR. WALLACE, *Obstetric Specialist*; DR. ATLEE, *The Celebrated Ovariologist*; DR. GERHARD, *Special attention given to Physical Diagnosis*—exposed to public view? Can he imagine men of the caliber of those named resorting to such displays? Does he believe that the University of Pennsylvania, in placing Dr. Agnew's name in the public announcement of its course of instruction was "advertising" that surgeon? On the contrary, was it not making legitimate use of Dr. Agnew's reputation to advertise the University?

We agree with DR. CONNOR that there is much abuse in the matter of advertising persons, institutions, and operations. But the remedy is not the one he proposes—to legitimize advertising by everybody. Rather enforce the Code as it stands, and send to Coventry the "great hospital physician or college professor" whose "picture is printed in the great dailies," and whose "interviews and notices of big operations appear in the daily papers." THE MEDICAL NEWS has never concealed its opinions on this subject, and the editor might well object to the use of his name as an example of an evil he has gained a thousand enemies by fighting.

Once more we say: "Two Wrongs do not make a Right." The fault lies, not in the Code, but in ourselves. The Code gives no "exclusive privileges" in advertising or other shame. It is the timidity of the medical press and the medical profession in the presence of successful rascality that permits "hospital surgeons and college professors" to violate not only eternal ethical principles but the letter of the written Code. Let us try the effect of enforcing the law before we talk about repealing it, and thus legitimizing conduct that is now, at least theoretically, prohibited.

We repeat that under existing circumstances there is only one of two courses open to the American Medical Association, if it would retain its self-respect. One, and the best, is to retain the present Code unaltered; the other is to abolish the Code entirely, and trust to public opinion to maintain the proper standard of conduct. But to legalize improper conduct by the adoption of the majority report upon Revision would be as disastrous as it would be foolish.

EDITORIAL COMMENTS.

The Possibilities of Thyroid Therapy.—In view of the marvellous results obtained from the administration of some preparation of the thyroid gland in one form or another in the treatment of myxedema and allied affections, it is not at all surprising that a remedy so distinctly useful should be tentatively and experimentally employed in a large number of other conditions, including those in which there is obvious or only possible involvement of the thyroid gland, as well as those in which there is no reason whatever to suspect such involvement. Reports of successes must under these circumstances be received with judicial skepticism, particularly if not presented by one of established reputation and unassailable character. Doubt and hesitancy vanish, however, in the face of reports made by such a careful observer, conservative thinker, and competent authority as BYRON BRAMWELL, of Edinburgh, who at the last meeting of the British Medical Association reported successful results from the employment of preparations of the thyroid gland in the treatment of psoriasis. Further observations seem but to confirm the earlier conclusions, and to indicate even a still wider field of usefulness for preparations of the thyroid gland. Being aware that cases of myxedema manifested a predisposition to tuberculosis, and not infrequently died from the intercurrent disease, and reasoning that this association might be due to the absence from the juices and the tissues of the body of the secretion of the thyroid gland, DR. BRAMWELL (*British Medical Journal*, No. 1737, p. 786) was led to use of thyroid extract by internal administration in the treatment of two cases of lupus that came under his observation, and with pronounced benefit. The results in these cases suggested the possibility of the thyroid

extract also being useful in other forms of tuberculosis, and as full doses are rather depressing, it would be wise, before employing the remedy in cases of pulmonary tuberculosis, to test the effect of its administration in cases of scrofulous disease of the cervical glands, bones, and joints in which the disease is not sufficiently advanced to demand surgical treatment. Finally the thought is thrown out that by improving the nutritive condition of the cutaneous structures thyroid extract may prove useful in the treatment of leprosy, and that by increasing the resisting power of the tissues it may also be of service in cases of carcinoma. From the apparently selective action of the thyroid preparations upon the skin and its adnexa we have ourselves thought that good results ought also to be obtained by the internal administration or subcutaneous injection of thyroid extract in the treatment of erysipelas.

Migraine in Infancy.—Intelligent observation and accumulating experience show that infancy does not escape many of the neuroses (perhaps we may learn to say none of the neuroses) observed in mature life. The diagnosis is obviously embarrassed by the difficulties attendant upon the elicitation of symptoms. Thus, it has been conclusively demonstrated that infants and young children may be unequivocally hysterical, and there is reason to believe that they may be similarly affected with migraine. Evidence in support of the latter proposition is furnished by the report by BETZ (*Memorabilien*, March 24, 1894, p. 79) of the case of a female infant, thirteen months old, that at a time when influenza was prevalent, was seized with an attack of febrile gastrointestinal catarrh, attended with diarrhea. In the course of this illness the infant was seized with twitching, affecting principally the hands and arms, occurring intermittently and also during sleep. It further indicated by gesture its complaint of pain in the head. Consciousness was perverted, but not lost. It was observed that the child manifested a tendency to grasp the left side of its head and to lie upon its left side, and on examination the left side of the head was found to be somewhat smaller in size than the right, while further investigation disclosed the fact that an elder sister and the mother both presented a similar asymmetry and suffered from attacks of migraine. The interesting features of the case are the age, the sex, the heredity, and the asymmetry of the face. In a diagnostic connection it is pointed out that on palpation the temperature may be found higher on the affected side than upon the opposite side, and that during the attack of pain the upper lid upon the affected side displays a tendency to droop. Therapeutically general rather than special measures are indicated. Diathetic and hereditary tendencies, as well as complicating conditions, are as far as possible to be corrected or removed. Opium may be used internally and topically with caution; ice-water compresses, topical applications of menthol, cocaine, or other may aid in the relief of pain.

New York Colony for Epileptics.—Some months ago we had the pleasure of noting (*THE NEWS*, Dec. 16, 1893, p. 694) the opening in Gallipolis, Ohio, of the first State Hospital for Epileptics in the United States. We have the gratification of being able to announce that the Legis-

lature of New York State has passed, and the Governor has signed, a bill establishing a colony for epileptics in that State. The colony is named after the late Oscar Craig, for some years President of the State Board of Charities. The bill provides for the purchase of a tract of 1875 acres of beautiful land in the Genesee Valley, near Mount Morris, in Livingston County. This tract is all in one piece, well watered by brooks, and consisting of fine fields, wood-land, and orchards, and already provided with picturesquely-grouped buildings to the number of thirty-five. It has been a colony of the Shakers for twenty or thirty years, and is perfectly adapted to its new use.

The law requires that all of the buildings put up should be on the village plan. A board of five managers is provided for, and by the appointment of the Governor has been constituted as follows: Dr. Frederick Peterson, of New York; Mrs. C. E. Wadsworth, of Genesee; George M. Shull, of Mount Morris; Dr. Charles E. Jones, of Albany; and W. H. Cuddeback, of Buffalo. The managers serve without salary, and meet at the colony once or oftener monthly.

At the organization of the Board in Albany, on the 3d of May, Dr. Frederick Peterson, of New York, was elected President, and George M. Shull, of Mount Morris, Secretary.

A medical superintendent, steward, matron, pathologist, nurses, school-teachers, teachers of various industries and arts, and so on, are to be appointed as needed; but the colony will probably not be ready to receive patients before the autumn of 1895.

It is thought that the colony will ultimately number from fifteen hundred to two thousand members. As soon as possible the six hundred epileptics in the county almshouses will be taken in charge. Later private patients will be received at prices corresponding to the accommodations asked for. It is believed that the colony will become self-supporting in the course of time, and that it will grow into an industrial and agricultural village that will more than rival the similar and famous colony at Bielefeld, Germany, upon which this is, to a certain extent, modelled.

The managers may accept any bequests of persons interested in the welfare of epileptics, and it is anticipated that many charitable wealthy people will build cottages upon the splendid sites on the tract to bear their names and exist as lasting memorials to their desire to serve humanity in this wise.

The time has arrived when the State of Pennsylvania must make similar provision for her large contingent of epileptics. The Legislature can no longer fail to heed the appeals from County Medical Societies and the State Medical Society for the establishment of one or more epileptic colonies.

Dr. William P. Dodson died May 11th, at his home in Philadelphia, at the age of ninety-three years. He had spent the greater part of his professional life in the Southern United States, whither he had been compelled to remove on account of some affection of the throat.

Wm. Goodell, M.D., LL.D.—The degree of Doctor of Laws was conferred upon Dr. Wm. Goodell at the recent commencement of Jefferson Medical College.

SOCIETY PROCEEDINGS.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Forty-fourth Annual Session, held at Philadelphia, May 15, 16, 17, and 18, 1894.

FIRST DAY—MAY 15.

MORNING SESSION.

THE Forty-fourth Annual Session of the Medical Society of the State of Pennsylvania, which was originally to have convened at Gettysburg, was opened on Tuesday morning, May 15th, in the Presbyterian Church building, Twelfth and Walnut Streets, Philadelphia. Delegates from all the county medical societies of the State were present in large numbers, and the usual spirit of fraternal interest was manifested. Shortly after the stated hour of convening, 9.30 o'clock, the President, DR. H. G. McCORMICK, of Williamsport, called the meeting to order, and the meeting was inaugurated by prayer by the REV. A. B. PHILPOTT. His Honor, MAYOR STUART, delivered the address of welcome, in which he dwelt upon the fame and pre-eminence of Philadelphia as a center of medical learning and the propriety of its selection as the place of convention for the State Association. DR. E. E. MONTGOMERY, the Chairman of the Committee of Arrangements, also welcomed the visiting delegates to the hospitality of the city and medical fraternity and presented the printed program as the order of business for the session.

The report of the delegates to the session of the American Medical Association held last May in Milwaukee, Wis., was made by DR. WM. B. ATKINSON, Chairman of the Committee. He reported a successful and pleasurable meeting, with an attendance of almost nine hundred delegates from the entire country. The report was accepted as read and placed on file.

DR. ATKINSON, as Secretary of the State organization, reported a membership of 2500. All of the county societies have shown a slow but healthy growth. The number of members added during the year is slightly in excess of that of previous years. He urged the secretaries of the various medical societies to invite all members of the profession in good standing and not already members to unite with their respective societies.

The Treasurer, DR. G. B. DUNMIRE, of Philadelphia, reported a cash balance in bank of \$1978.49, after deducting the expenses for the year, which amounted to \$2143.75. The report was referred to the Auditing Committee.

On motion of DR. ATKINSON, all members of the Philadelphia County Medical Society not delegates to the meeting were invited to attend the sessions of the Convention and participate in the discussions.

DR. EDWARD JACKSON, in behalf of the Committee on Publication, reported that 2500 copies of the *Transactions* of the Association had been printed at an expense of \$1070. Copies of these had been distributed among the various hospitals, colleges, and county medical societies of the State. The committee suggested that the character of the binding of the *Transactions* be improved, which could be done with but slight additional expense. It was also suggested that a page be

devoted to information concerning the American Medical Association, giving instruction as to how to become a member in that organization, etc. The report of the committee was accepted.

Dr. CHARLES W. DULLES, Chairman of the Committee on Scientific Business, stated that owing to the remoteness of the homes of the members of the committee, the work had been carried on principally by correspondence. Progress was reported, and expenses amounting to \$33.73 incurred, which, it was resolved, should be placed in the hands of the Treasurer for payment.

The Legislative Committee, Dr. H. G. McCORMICK, of Williamsport, Chairman, reported the passage of the Medical Examiners' bill, and the appointment of the members of the Board.

The first examination under the new law of physicians desirous of entering upon medical practice in Pennsylvania will be held on June 11, 1894, at Pittsburg and Philadelphia.

The Committee also reported that, in accordance with the instructions given it by the Society, it memorialized the Legislature on the subject of the care of the insane. The Senate passed a bill providing for the changes which the Society desired, but the House of Representatives failed to do so. The report of the Committee was accepted, and the Committee discharged with the thanks of the Society.

Dr. LIPPINCOTT, Chairman of the Committee on Contagious Ophthalmia, stated that the Committee had investigated the methods of eradicating this disease. Circulars had been sent to the ophthalmic surgeons throughout the State soliciting suggestions and assistance. The greatest danger lies in the general ignorance as to the gravity of the affection. The Committee urged additional inspection and also the importance of more rigid examination of immigrants for the existence of trachoma, which it has been ascertained is most common in New York City, chiefly because that city is the main port of immigration in this country. The report was accepted and the Committee discharged.

Dr. ATKINSON read the resolutions adopted by the Philadelphia County Medical Society concerning the conduct of the *Journal of the American Medical Association* in reference to nostrums, etc. These resolutions were published in THE MEDICAL NEWS of April 28, 1894, p. 463. The discussion of the communication was postponed until Wednesday morning.

Dr. G. M. GOULD read the following preamble and resolution, which were unanimously adopted:

Whereas, By all physicians it is admitted that a large proportion of the blindness of the world is due to the disease called ophthalmia neonatorum; and

Whereas, The well-known treatment of this disease by a physician, if at a sufficiently early period in its course, almost always results in preventing the blindness that would otherwise follow; and

Whereas, A committee appointed by the Ophthalmological Section of the American Medical Association at its last meeting has, after thorough consideration, drafted a blank form of a law and urged its passage by all State Legislatures, as well as advised all physicians to aid in securing the passage of such a law; and

Whereas, This blank form of a law drafted by the said Committee is as follows:

The people of the State of — represented in Senate and Assembly, do enact as follows:

SECTION 1. Should one or both eyes of an infant become inflamed, or swollen, or reddened at any time within two weeks of its birth, it shall be the duty of the midwife or nurse having charge of such infant to report in writing within six hours to the health-officer or some legally qualified physician of the city, town, or district in which the parents of the infant reside, the fact that such inflammation, or swelling, or redness of the eyes exists.

SEC. 2. Any failure to comply with the provisions of this act shall be punished by a fine not to exceed two hundred dollars, or imprisonment not to exceed six months, or both.

SEC. 3. This act shall take effect on the — day of —, eighteen hundred and ninety —.

And whereas, Five States have already placed upon their Statute Books laws similar to or identical with the foregoing law, while in other States the same measure is under consideration; and

Whereas, The Philadelphia County Medical Society on May 9th unanimously passed a resolution indorsing the law recommended by the Committee of the Ophthalmological Section of the American Medical Association, and appointed a committee to devise means and methods of securing the enactment of such a law by the Pennsylvania State Legislature; therefore be it

Resolved, 1. That in the opinion of the Medical Society of Pennsylvania it is of the most vital importance to the welfare and happiness of the community, and to the good name of the State of Pennsylvania, which has always been foremost in matters pertaining to the health of her citizens, that the law recommended by the Committee of the Ophthalmological Section of the American Medical Association should be enacted by the Legislature of the State, and the Medical Society of Pennsylvania respectfully requests the Honorable Representatives of the State at Harrisburg to do all in their power toward placing such a law upon the Statute Books of the State of Pennsylvania.

2. That a committee of three be appointed to cooperate with the Committee of the Ophthalmological Section of the American Medical Association and the Philadelphia County Medical Society, to devise means and methods of securing the enactment of such a law.

On motion of Dr. JACKSON an amendment was made and carried, that the Committee be given power to add to itself associate members.

Dr. HIRAM CORSON moved that a Legislative Committee be appointed, and instructed to investigate the subject of the care and treatment of the insane, and the organization and construction of hospitals for the insane. The motion was referred to the Committee on Legislation when said committee should be appointed.

On motion of Dr. ATKINSON, Dr. R. P. Granger, of New York, was extended the courtesies of the floor.

Dr. J. C. GABELL, of York, offered the following resolution:

Resolved, That a committee of seven be appointed by the President of this Society to consider the feasibility of and make suggestions relative to the appointment of an inspector, whose duty it shall be to aid the State Board of Medical Examiners of Pennsylvania to more efficiently carry out the best interests of medical legislation in this Commonwealth, the committee to report under unfinished business on Wednesday. Carried.

An invitation was read from the Luzerne County Medical Society to hold the meeting in 1895 at Wilkes-barre, Pa. Referred to the Committee on Nominations. Also a resolution was offered to the effect that the Society enters its protest against the use of the name "Allopath," as applied to regular members of the profession. Carried.

DR. S. SOLIS-COHEN offered a resolution expressing it as the sense of the Pennsylvania State Medical Society that the Code of Ethics of the American Medical Association be not altered, and instructing its delegates to vote in accordance therewith. Carried unanimously. At 11.30 o'clock the meeting adjourned until 3 P.M.

AFTERNOON SESSION.

The Address in Surgery, delivered by DR. G. D. NUTT, of Williamsport, was limited to some general remarks upon recent progress in surgery. The advances in brain-surgery and spinal surgery, including the treatment of epilepsy, the modern methods of hysterectomy, and the management of ectopic pregnancy, the exploration of the kidney, were all touched upon. Attention was called to the marked influence of aseptic surgery in reducing the mortality of major operations. The value of Wyeth's hip-joint amputation by means of skewers received especial mention. Dr. Nutt dwelt largely upon the importance of an early diagnosis in such medico-surgical diseases as appendicitis, obstruction of the bowel, etc.

"The Radical Cure of Hernia," was the title of an interesting paper read by DR. E. LAPLACE, of Philadelphia, who claimed that the term "radical" indicated of necessity a certain amount of accuracy. In considering the subject of the predisposing causes of hernia, he doubted the importance of elongation of the mesentery as a causative factor, but considered weakness of the abdominal walls as the most essential element in the etiology. The treatment of hernia includes removal of the hernia and complete retention of the bowel within the abdominal cavity; and secondly, the use of such measures as will insure strengthening of the abdominal walls. There have been advocated many methods of removing a hernia, but the writer favored the McBurney method, in which the sac is dissected and ligated, and granulation of the canal is favored by packing with iodoform-gauze. The firmest citatrices are those resulting from burns; therefore, he suggests the cauterization of a portion of the canal. Three weeks of granulation are absolutely necessary to prevent a non-recurrence of the condition. In all cases of small hernia, Bassini's operation has been followed in his hands by gratifying results. He reported 87 cases operated upon by himself in the last four years, with a mortality of *nil*; 27 scrotal cases, all large, were operated on by McBurney's method, resecting the sac, and transplanting the cord, as in Bassini's method. There were three recurrences. Sixty operations were performed according to Bassini's method, and a double operation in four patients. Silkworm-gut was used altogether. In five cases there were signs of recurrence, and these five patients were suffering from general malnutrition, and had concomitant conditions (syphilis, tuberculosis, etc.). Suppuration must be prevented by a judicious application of sutures to prevent strangulation of the tumor—not too tightly drawn—and by thorough asepsis. For three

months an abdominal support must be worn. Massage of the abdominal walls was recommended to increase the nutrition of these parts. In conclusion, he regarded hernia as primarily a condition dependent upon trophic changes in the abdominal wall. If the hernia be small, the sac is not opened; if large, it is opened by McBurney's method, and the canal is cauterized with the thermocautery, and allowed to granulate. He recommended early operation for a radical cure in every case of incipient hernia.

DR. F. LE MOYNE, of Pittsburg, read a paper entitled "Modification of Pirogoff's Amputation." The modification consists in a retention of the extremities of the tibia and fibula to prevent shortening. The calcaneum is sawed through less obliquely. Good results have followed this operation. Dr. Agnew had done the same operation, also with good results.

DR. J. V. SHOEMAKER, of Philadelphia, gave some interesting clinical observations upon diseases of the skin. Six patients were shown suffering from psoriasis. The etiology varied in each case. In one case there was associated a nervous condition; in another the affection was due to rheumatism and a gouty diathesis; in another there was a disturbance of the gastro-intestinal tract. The rheumatic case, fifteen years ago, under the administration of potassium iodid, had been cured. The rheumatism has now returned, and with it the eruption. The man was taking ten grains of sublimed sulphur and one grain of cream of tartar, and the eruption was gradually fading. The treatment in each case varies with the cause. If due to gastro-intestinal lesions, dilute hydrochloric acid and liquor pepsin before meals, with sulphate of strychnin after meals, will suffice. One case had been given fried thyroid gland in the morning and evening, and the lesion of the skin was fading. Dr. Shoemaker was unable to say just how the thyroid extract acted in psoriasis.

DR. J. C. McALLISTER, of Driftwood, read a paper on "Puerperal Eclampsia and its Treatment chiefly by the Hypodermatic Use of Veratrum Viride." He adopted the view of the etiology of the affection which ascribes it to the presence of retained excrementitious matter in the blood. The presence of albumin in the urine is not sufficient cause for prognosticating the onset of eclampsia; the albuminuria is rather the result of the eclampsia. The proper treatment of eclampsia is mainly eliminative by means of the skin, bowels, and bladder. For this purpose a variety of remedies has been advocated—venesection, chloral, chloroform, morphin. They are all of service, but in veratrum viride we have a drug which is almost free from danger, and which has a marked effect in reducing the action of the heart. By watching the pulse the efficacy of the treatment can be demonstrated. He recommended fifteen drops of the tincture as an initial dose, with whiskey or brandy as required. As a rule, the veratrum should be continued for a day or two until the convulsive tendency is over. When there is not great stupor he advised morphin hypodermatically in addition to the veratrum. In stertorous cases atropin is especially indicated. In one case he administered $\frac{1}{16}$ grain in divided doses within twenty minutes.

DR. FISHER, of Philadelphia, considered the time of the occurrence of the convulsions as an important ele-

ment in the treatment. He favored the use of hot baths rather than the use of diaphoretics internally administered.

"Chronic and Recurrent Appendicitis" was the subject of a paper read by DR. JOHN B. DEEVER, of Philadelphia, which will be published in a future number of THE MEDICAL NEWS.

DR. ORVILLE HORWITZ, of Philadelphia, contributed a paper upon "The Treatment of Stricture of the Urethra." He said that, generally, dilatation is the usual and safest method of treatment. A small-sized bougie should be tried first, in order to avoid causing abrasion or laceration of the mucous lining; the size of the instrument may be increased as the pain and bleeding diminish. The instrument should be introduced once in three days, and should be sterilized and anointed with an antiseptic ointment containing oil of eucalyptus. This is the safer method in diabetes and advanced renal disease. The death-rate of internal urethrotomy is 2 per cent., while dilatation is never followed by death. In continuous dilatation a small filiform bougie should be used and allowed to remain three days. Enough dilatation will then have been accomplished to proceed with some other method. This plan is of service in cases of small stricture in the membranous portion of the urethra, or in cases in which the stricture at any point is very tight. A preliminary injection of carbolyzed oil is a valuable procedure.

DR. DEEVER was surprised to hear that the mortality of internal urethrotomy was 2 per cent. He had operated many times, without a death. He was not an advocate of the operation in all cases, but believed it has a larger scope than that given it by Dr. Horwitz. He has had more success in external urethrotomy without, than, with the use of a staff.

DR. JOHN H. BRINTON, of Philadelphia, in the treatment of deep stricture indorsed Dr. Horwitz's paper. He had employed rapid dilatation for twenty years, and had never met with a death. He had never met with a deep-seated idiopathic stricture through which he could not pass a filiform bougie.

DR. O. H. ALLIS, of Philadelphia, read an interesting paper on "Cramming in Medical Schools," which is to appear in a future number of THE NEWS.

The following papers were read by title: "Section of the Tendo Achillis in Certain Fractures and Dislocations of the Lower Extremity," by Dr. T. S. K. MORTON, of Philadelphia; "The Treatment of Naso-Pharyngeal Catarrh," by DR. WM. R. HOCH, of Philadelphia; "Thyroidectomy in the Treatment of Goiter," by DR. JOHN B. ROBERTS, of Philadelphia; "Rural Sanitation," by DR. T. H. WEAGLY, of Marion; and "Amputation Below the Knee," by DR. M. PRICE, of Philadelphia.

DR. D. BRADEN KYLE, of Philadelphia, contributed a paper entitled "The Effect of La Grippe on Normal and Diseased Respiratory Mucous Membranes." He said that the respiratory mucous membrane consists of a basement-membrane upon which are epithelial cells, and under which are bloodvessels, glands, and nerves. Its essential function is to secrete mucus. Any inflammatory lesion first alters the submucosa; this alteration depends upon the variety and the severity of the inflammation. He has found no germ constantly present. In

those cases without preëxisting lesion of the mucosa the transudate from the vessels is more than a mere inflammatory exudate; it is a highly coagulable, albuminoid material which infiltrates the tissue. In those cases in which there were preëxisting lesions the exudate was of the same character, but its effect on tissue and function was inconstant, being controlled largely by the preëxisting pathologic alteration. In all conditions the mucosa must be cleansed and rendered aseptic, after which a stimulating application may be made. Alteratives as well as tonics and stimulants must be administered internally.

SECOND DAY, MAY 16TH—MORNING SESSION.

The meeting was called to order at 9.30 o'clock, when the "Address in Medicine" was delivered by Dr. W. S. FOSTER, of Pittsburg. He spoke of the great multiplicity of proprietary mixtures, especially those containing the coal-tar preparations, which were likely to give rise to considerable confusion in the proper selection of medicines. The reaction in favor of blood-letting was noted, and also the controversy over the respective merits of chloroform and ether. The employment of tincture of digitalis in continued fevers had been followed by excellent results. He believed that the early administration of digitalis in typhoid fever, producing as it does an increase in the activity of the heart, will tend to tide the patient over the period of depression. In pneumonia, also, in conjunction with strychnin, it is of service. The use of free oxygen gas in pneumonia is a valuable advance in the treatment of that disease. He believed that preventive medicine has assumed such proportions as bid fair to place it in the foremost rank in the management of pathologic conditions.

"Christian Science in its Relation to the Medical Profession," was the title of a thoughtful paper read by Dr. HILDEGARDE H. LONGSDORF, of Carlisle. She regarded this doctrine as the most pretentious and most successful outgrowth of our higher civilization. In an ingenious way she revealed the absurdities of this highly developed species of quackery.

On motion of Dr. COHEN, of Philadelphia, it was agreed to have one thousand copies of Dr. Longsdorf's paper printed by the Committee on Publication, for distribution among the laity.

DR. S. S. COHEN delivered a spirited address upon the query, "Should the *Journal of the American Medical Association* be used to Promote Quackery?" He paid an eloquent tribute to the *Pittsburg Medical Review*, which he considered as the cleanest and most outspoken medical publication in this country. He quoted the article in the Code of Ethics of the American Medical Association on patent medicines, and the duties of physicians in regard to their recognition, manufacture, and dispensation. This is an organic law of the American Medical Association, and never since its promulgation has it been repealed. It is a trust of the American Medical Association, and should as such be religiously carried out, yet the pages of the journal of this Association are filled with the advertisements of secret nostrums. In criticising the Trustees of the *Journal*, he was not criticising them personally, but only their official conduct, which he believed should ever be open to criticism. He protested that the Pennsylvania State Medical Association,

that the American Medical Association, be not made partners in such affiliations with the proprietors of quack preparations.

DR. THOMAS, of Philadelphia, stated that one of the reasons for the foundation of the *Journal of the American Medical Association* was that the profession should have a pure, ethical journalism. Now we see that *Journal* going as far or even further than other journals in helping to support itself by publishing quack advertisements. He offered resolutions embracing those adopted by the Philadelphia County Medical Association, resolutions to the same effect, but further sanctioned by the action of the State Medical Association, and to be presented to the American Medical Association at its meeting in San Francisco.

Resolved, That the Medical Society of the State of Pennsylvania hereby indorses the resolutions concerning the conduct of the *Journal of the American Medical Association* transmitted from the Philadelphia County Medical Society.

Resolved, That it is the opinion of this Society that if the finances of the American Medical Association do not permit of the publication of a journal that does not violate the Code of Ethics by the insertion of notices of secret nostrums and other objectionable advertisements, the Trustees should be instructed to cease publication.

Resolved, That these resolutions, together with the resolutions of the Philadelphia County Medical Society, be officially transmitted to each Trustee of the American Medical Association, and that the delegates to the American Medical Association elected at this meeting be instructed to present the same to the meeting of the American Medical Association at San Francisco, and to use every honorable endeavor to secure such action as shall effectually remedy the matter complained of.

DR. BISHOP suggested that if it had become necessary for the support of the *Journal* that secret nostrum advertisements find a place upon its pages, it would be well to make the suggestion at the San Francisco meeting that the publication of the *Journal* be stopped or that the Board of Trustees be reconstructed.

DR. JEFFRIES, of Delaware County, suggested that if he or any other member of any of the County Medical Societies should open themselves to such criticism as had the Board of Trustees of the *Journal of the American Medical Association*, they would have been reprimanded, suspended, or expelled from the medical organization, and he would be inclined to take similar action against the Trustees of the *Journal*.

DR. B. H. DETWILER, of Williamsport, read a paper entitled "Croup and Diphtheria," in which he advocated early depletive and revulsive treatment in all cases of membranous croup. In this way he believed that the high mortality of the disease could be diminished and intubation not be required.

DR. S. SOLIS-COHEN regarded non-diphtheric or true croup as being exceedingly rare. True croup is a sthenic inflammation, while diphtheric croup is toxic and is associated with a degree of toxemia. Hence the danger of confounding the two conditions.

DR. CHARLES HERMON THOMAS, of Philadelphia, read a paper entitled "Eye-strain from Muscular Causes and its Treatment by Tenotomy." He regarded the diplopia-tests as indispensable in arriving at any con-

clusion. He did not believe that a complete tenotomy is required in every case of heterophoria. A gain of from 1° to 8° may be obtained without complete severance. He quoted cases from his note-book.

DR. LIPPINCOTT, of Pittsburg, regards photophobia as the principal symptom of muscular asthenopia. He would also call attention to the association existing between epilepsy and muscular asthenopia.

Under the head of new business DR. GABLE presented the following report of the committee appointed on Tuesday:

Resolved, That the Secretary of each county society is requested to forward at once to the Secretary of the State Board of Medical Examiners a correct list of registration of doctors under the last Act, on and from the 1st day of March last, and quarterly thereafter; and in communities where there are no county societies the President of this Society shall appoint a member of this Society living in such county to procure such list, and in any case of neglect by either the officers aforesaid or the appointee to send such a list, the Secretary of the State Board of Medical Examiners of this Society shall be empowered to procure the same; and further be it

Resolved, That we recommend that \$500 of the moneys of the Society, or so much thereof as may be necessary, be appropriated for the examination of the registration of physicians in this State, with the view of enforcing the Medical Examiners' Act lately passed, said money to be expended only under the direction of the State Board of Medical Examiners representing this Society, and that they shall approve all bills before being paid. Further, that the said Board of Examiners report at the annual meeting of this Society their action and expenditures under this resolution.

DR. LE MOYNE, of Allegheny, offered a resolution to the effect that at the meetings of the State Medical Association the time allotted to the reading of papers be reduced to ten minutes, and the discussion thereof to five minutes per man. As this resolution involved an alteration of the Constitution, it was laid on the table until the next annual meeting.

AFTERNOON SESSION.

At 3 o'clock the Committee on Nominations, Edward Jackson, M.D., Chairman, made its report. The officers selected for the succeeding year were as follows: President, Dr. John B. Roberts, of Philadelphia; First Vice-President, Dr. S. C. Stewart, of Clearfield County; Second Vice-President, Dr. J. A. Lippincott, of Allegheny County; Third Vice-President, Dr. J. H. Wilson, of Beaver County; Fourth Vice-President, Dr. R. Armstrong, of Clinton County; Secretary, Dr. W. B. Atkinson, of Philadelphia; Assistant Secretary, Dr. H. G. Kreutzman, of Franklin County. Chambersburg was selected as the place of the next meeting.

The address on "Mental Diseases" was delivered by DR. T. M. T. McKENNA, of Pittsburg. He said that the toxic origin of insanity is now generally accepted. This poison may be generated in the body of the mother or in the body of the patient himself. Auto-intoxication is the cause and not the effect of the mental condition. This may be proved by the fact that injection of the urine of a maniacal patient into the tissues of an animal will produce delirium and exaltation of the corporeal

activity, while the urine of a melancholy patient when injected produces marked bodily depression. The predisposition to psychoses should contraindicate operative procedure. The propriety of examining insane female patients cannot be doubted. The main cause of insanity in women lies in disease of the pelvic organs. The frequency of renal inadequacy in the insane has been noted, and insanity due to kidney-trouble is much more frequent than has been supposed. The close etiologic relationship between syphilis and general paralysis of the insane is now becoming quite clear. Hypnotism as a curative agent is only of value in cases of insanity of hysterical origin.

DR. CHARLES W. DULLES, of Philadelphia, presented a report on "Hydrophobia," which will be published in a future number of THE MEDICAL NEWS.

DR. CHARLES K. MILLS, of Philadelphia, was somewhat conservative in his views as to whether or not hydrophobia as a disease does exist. It is at any rate an extremely rare disease. He has seen a patient with sclerosis die in the Philadelphia Hospital with symptoms of hydrophobia; other nervous diseases may give rise to the symptoms of hydrophobia, and doubtless many of the so-called cases of hydrophobia are in reality cases of mistaken diagnosis.

DR. S. MACCUEEN SMITH, of Philadelphia, read a paper on "Simple Inflammation of the Middle Ear and their Sequelæ." In all cases the ears of the newborn child should be examined, and if no accumulations in the external auditory meatus be found, and the membrane seems to be inflamed to any extent, the middle ear should be inflated according to Politzer's method. There are two forms of acute inflammation of the middle ear: one is due to exposure to cold, wet, etc., and the other is due to the entrance of some infectious agent. Whatever the cause of the inflammation, the inflammatory exudate will undergo fatty degeneration unless removed. Inflation of the ear is the important element of treatment in most cases. Deaf-mutism must be regarded as a sequel of some preëxisting inflammatory disease.

DR. CHARLES H. BURNETT, of Philadelphia, had never seen an acute inflammation of the middle ear in a newborn child. The common cause of dermatitis in the external ear is swabbing out of the canal with cotton, and this in time may produce middle-ear disease. The external ear of the newborn child should be left severely alone.

DR. B. A. RANDALL, of Philadelphia, suggested that in making an examination of the ear of an infant the auricle should be drawn *downward* as well as backward in order to facilitate the procedure. When injections are used in the ear, the water should be hot, of a temperature of from 110 to 118°.

DR. ANNA M. FULLERTON, of Philadelphia, read a paper entitled "Studies in Obstetrics and Gynecology," based on eight years' experience in the hospital of the Woman's Medical College.

DR. W. C. HOLLOPETER, of Philadelphia, contributed a paper entitled "Brief Review of the Therapeutics of Whooping-cough." He considered whooping-cough as a very fatal, perhaps the most fatal of all diseases of infancy. This was due to the gravity of its numerous sequelæ. He considered an early recognition of the nature of the disease during the catarrhal stage as of the

utmost importance. In making his diagnosis he trusts to the peculiar puffiness often observable in the mucous membrane of the eyes.

DR. G. G. DAVIS, of Philadelphia, gave an interesting exhibition of some "Cases of Amputation near the Ankle," one of which had been operated upon by a country physician with perfect results; another, a boy of seventeen, had had a Chopart's amputation, and was able to go off on long tramps. Dr. Davis wished to prove the superiority of the low amputation over amputation below the knee.

The "Address in Obstetrics" was delivered by Dr. E. E. MONTGOMERY, of Philadelphia. He touched upon a few of the more important conditions from a surgical standpoint. Symphysiotomy he regarded as capable, within certain limits, of decreasing the danger to both mother and child. The objections that had been advanced against the operation were that it was both dangerous and tedious; that there was danger of sepsis and of injury of the urethra and bladder, and that it necessitated another operation to deliver the child. While these are well founded, the other operations and obstetric conditions are of still greater gravity. In regard to puerperal sepsis, he stated that the tissues may be infected from the genital tract by an extension of the infection through the tissues, by extension through the tubes, and by extension by the bloodvessels and lymphatics. The extension by the bloodvessels is the most virulent. Curettement, douching, and thorough drainage of the cavity of the uterus by packing with iodoform-gauze constitute the treatment of this condition.

If secondary foci of the disease have developed in the uterine wall with pus-collections, extirpation of the uterus is indicated after exploratory section. It is remarkable how popular the operation of vaginal hysterectomy has become. It is used now not only for carcinoma of the cervix, but in cases of small bleeding fibroids, and in women suffering from uterine sepsis, in whom the disease is confined to the uterine walls. The speaker recommended cauterization of the stump, and the carrying of iodoform-gauze through the cervical canal into the vagina.

(To be concluded.)

NEWS ITEMS.

The Fifth District Branch of the New York State Medical Association will hold its tenth annual meeting in Brooklyn on Tuesday, May 22, 1894. The President, J. D. Rushmore, will deliver an address on "The Prevention of the Disagreeable and Dangerous Symptoms produced by Ether as a General Anesthetic." Other papers will be read as follows: "The Dietetic Treatment of Consumption," by T. J. McGillicuddy; "The Treatment of Chronic Oöphoritis by Electricity," by Edward Sanders; "Report of a Case of Chronic Peritonitis with Intestinal Fistula; Celiotomy; Enterorrhaphy; Recovery," by Frederick Holme Wiggin. General discussion of "Vaccination," opened by F. A. Jewett, S. E. Jelliffe, and H. H. Morton.

Prof. Escherich, the distinguished pediatricist, of Gratz, has been elected to the chair of the Diseases of Children, to succeed Heubner at the University of Leipsic.